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# RECORD, CASE No 13,671.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1892.

TERM No., 113.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, APPELLANT,

*vs.*

THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, AND THE GRAND HAVEN WATER WORKS.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE WESTERN DISTRICT OF MICHIGAN.

FILED OCTOBER 1, 1889.

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1 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

To the honorable the judges of the circuit court of the United States for the western district of Michigan, in equity:

The Boston Safe Deposit and Trust Company, which is a corporation organized under the laws of the State of Massachusetts and which has its principal office at the city of Boston, in the State of Massachusetts, and is a citizen of the State of Massachusetts, as complainant, brings this bill of complaint against the city of Grand Haven, which is a municipal corporation organized and incorporated under the laws of the State of Michigan and located within the said southern division of the western district of Michigan and is a citizen of said last-named State, and Alvah L. Holmes, who is a citizen of the State of Michigan, residing in the southern division of the western district of Michigan, and the "Grand Haven water works," which is a corporation organized under chapter 84 of Howell's Annotated Statutes of Michigan and which has its principal office and place of business at Grand Haven, Michigan, and which is a citizen of the State of Michigan, as defendants.

And thereupon, humbly complaining, respectfully shows unto your honors your orator, the said complainant in this bill, as follows, viz:

1st. That at the time of the passage by the common council of said city of Grand Haven of the resolution of the 12th of April, 1883, herein mentioned, a copy of which is hereto annexed,
2 marked "Exhibit A," the said defendant was and still is a city within the southern division of said western district of Michigan, duly organized and incorporated under the laws of the State of Michigan under and by the corporate name of the city of Grand Haven.

That said city then had, as your orator is informed and believes and therefore charges, a population of about, but not to exceed, six thousand inhabitants residing within its corporate limits, and, as your orator is also informed and believes and charges, said city still has a population of about but, if anything, not quite so great a number of inhabitants as at the time last aforesaid.

2nd. And your orator further shows to your honors and charges that at the time of the passage of the said resolution of the 12th day of April, 1883, the said defendant had a small pumping engine and a small amount, not exceeding a half a mile, of water pipe, nearly all of which was of wood, laid in its streets for the purpose of supplying water for the extinguishment of fires in said city, the water supply for which was obtained partly from drive-wells, so called, and partly from the Grand river, adjacent to said city.

But your orator charges that said city did not then have any adequate or proper supply or means of supplying water for the use of

said city or for its streets and public buildings or for the extinguishment of fires therein or for the protection of said city or of the property therein or the inhabitants thereof from loss and injury by fire or for the use of the inhabitants thereof for domestic and other necessary uses and purposes.

And further states and charges that said city and the public authorities and the inhabitants thereof were then desirous of taking some measures and of making some arrangement whereby a supply of water could be secured for the use of said city and its in-
3 habitants for the purposes aforesaid, and the common council of said city deemed it expedient that water works should be constructed in said city for the purpose of supplying said city and the inhabitants thereof with water for the uses and purposes aforesaid, but said common council did not deem it expedient for said city to build such water works at its own cost and expense.

3rd. And thereupon and on the 12th day of April, 1883, the said common council of said city, for the purpose of securing and providing a water supply for said city and the inhabitants thereof for the uses and purposes aforesaid and to induce and authorize the formation of a suitable corporation to furnish such water supply to said city and the inhabitants thereof, did, by authority and in pursuance of an act of the legislature of the State of Michigan entitled "An act to authorize the formation of companies for the introduction of water into towns, cities, and villages in the State of Michigan," approved April 3, 1869, duly adopt and pass a resolution wherein said council declared, amont other things, that it was expedient to have constructed water works for the purpose of supplying the said city of Grand Haven and the inhabitants thereof with water for fire, domestic, and other purposes, but that it was inexpedient for the city of Grand Haven, under the power granted in its charter, to build water works, a copy of which said resolution is hereto attached and marked "Schedule A," and is here made a part of this bill and of the allegations thereof.

4th. And your orator further shows that thereupon and on or about the 25th day of September, 1883, the S. L. Wiley Construction Company, a corporation organized under the laws of the State of Massachusetts, induced thereto by the passage of said resolution of the said common council, proposed to form a water works company or corporation at said city of Grand Haven, under and by
4 authority of said resolution and the said statute under which the same was adopted and passed, for the purpose of constructing water works at said city and of supplying and to supply said city and the inhabitants thereof with water for the uses and purposes aforesaid.

And with that view and for that purpose the said construction company at the time aforesaid proposed and made to the common council of said city a proposition in writing to form a water works company or corporation at said city, under the laws of the State of Michigan, and thereby to construct water works and to supply the said city and the inhabitants thereof with water therefrom for fire, mechanical, manufacturing, and domestic purposes for the term of

twenty-five years upon the terms and conditions and for a grant of the franchises and privileges in said proposition in writing set forth; a copy of which proposition in writing is attached to and made a part of Schedule B, hereto annexed, and is hereby made a part of this bill and of the allegations thereof.

5th. And your orator further shows that upon receiving said proposition in writing the said common council, by resolution, directed that a contract should be arranged between the said city and said proposed water works company for the construction of water works and the supplying of water by it to said city and the inhabitants thereof for the uses and purposes aforesaid, in conformity with the terms in said proposition in writing contained.

6th. And further shows and charges that after the approval in the manner aforesaid by said common council of the said proposition in writing Solon L. Wiley, one of the members of said corporation, the said S. L. Wiley Construction Company, together with certain others as his associates, for the purpose of carrying out the stipulations of the said S. L. Wiley Construction Com-
5 struction Company in said proposition in writing contained and for the purpose of complying with the last-mentioned resolution and direction of said common council, formed and organized a water works company and caused the same to be incorporated at said city of Grand Haven under and by virtue of and in compliance with the provisions of said above-mentioned act of the legislature of Michigan, entitled "An act to authorize the formation of companies for the introduction of water into towns, cities, and villages in the State of Michigan," which said company was incorporated under and by the corporate name of the "Grand Haven water works," for the purpose of constructing such water works as aforesaid and of supplying said city and the inhabitants thereof with water for the uses and purposes aforesaid, as contemplated in said proposition in writing and by said common council in approving the same in the manner aforesaid, which said corporation, the Grand Haven water works, is made a party defendant to this bill.

6th. And your orator further states and charges that upon the organization of said water works company the said Grand Haven water works, as aforesaid, and on or about the eighth day of November, 1883, the said city of Grand Haven, by the action and direction of its said common council and in pursuance and by reason of the proceedings aforesaid, made and entered into a contract in writing with said corporation, the said Grand Haven water works, wherein and whereby the said water works company, for certain considerations in said agreement or contract and in the said proposition in writing mentioned, agreed on its part, among other things, to build and construct water works at said city and to furnish water therefrom to said city to the extent and of the quality and upon the terms and under the circumstances mentioned in said contract and proposition in writing, a copy of which said proposition in writing was attached to and made a part of said
6 contract, and in and by said contract the said city of Grand Haven, for certain considerations therein and in said proposi-

tion in writing mentioned, gave and granted to said Grand Haven water works the privileges and franchises therein mentioned, including the right to build and erect its water works and to lay its water pipes in the streets, lanes, and alleys, avenues, docks, and other public places in said city, and agreed, among other things, that upon the performance of said contract by said Grand Haven water works to pay to it the sum of $4,200 per year in equal quarterly payments for water to be supplied to said city from its works, and further agreed that said proposition in writing should be a part of said contract, and that it, the said city of Grand Haven, would perform all things on its part to be performed as therein specified; which said contract was duly executed on the part of the said Grand Haven water works by its president and secretary and by and on the part of said city of Grand Haven, under direction of said common council, by its mayor and recorder; a copy of which said contract in writing, with a copy of said proposition in writing (which, as hereinbefore stated, was made a part of said contract) thereto attached, is hereto annexed, and the whole is marked "Schedule B," and is here made a part of this bill and of the allegations thereof.

8th. And your orator further states and charges that immediately upon the execution of said contract with said city as aforesaid the said water works company entered upon the construction of said water works and upon the performance of its said agreements with said city and constructed its said water works substantially in accordance with said contract and the requirements thereof, and by the permission and authority of the common council of said city and in pursuance of the provisions of said act of the legislature above mentioned laid its water pipes in the streets and public places in
7 said city and set and placed thereon the number of hydrants or fire purposes required by said contract, which hydrants, sixty in number, were set and located at such places as were directed by said common council or by such officers or persons as were directed by said council to designate and fix the location for the same.

And your orator says that by the terms of said contract the said water works were to be completed and ready for use on the first day of July, 1884, but that said common council afterwards extended the time for the completion thereof two months from said first day of July, and that said works were finally completed and ready to supply said city and its inhabitants with water therefrom on or about the first day of November, 1884, and that on the third day of November, 1884, the said water works company notified the said city and the common council thereof that said water works were then completed, and that the said company, the said Grand Haven water works, was ready to furnish water under its said contract with said city, and that water would be from that time furnished and supplied in the pipes, mains, and hydrants for the various uses and purposes in said contract mentioned, and that from that time on said city was at liberty to take and use the water from said system and works under the terms of said contract, and that said city would be charged for rent on said hydrants from that date at the rate named in said contract; and your orator says that at the time

last aforesaid the said water works company commenced to supply said city and the inhabitants thereof with water from its said works, pipes, and hydrants according to the terms of said contract, and that it has ever since that time so supplied and furnished water from said works to said city for the extinguishment of fires and for such other uses and purposes as said city has desired to use the same, and the said city has ever since that time and at all times when it so
8 desired taken and received water from said works, pipes, and hydrants for the extinguishment of fires and for such other uses and purposes as it has desired and is still continuing so to do, and also that ever since the completion of said works as aforesaid the said water works company has in accordance with said contract supplied good and wholesome water from its said works to the inhabitants of said city or to such of them as have desired to use such water, and that it is still able, ready, and willing to furnish and is still furnishing such water from said works to said city and to the inhabitants thereof in such quantities as is or may be desired.

And your orator further charges that if there was any default on the part of said water works company in not completing the said works within the time named in said contract or within said extension of time for the completion of the same that said city, by accepting, receiving, and using water from said works during the time and for the purposes it has taken and used the same, as hereinbefore stated, has waived such default, and the said city has not been prejudiced by the same.

9th. And your orator further states to the court and charges that the said water works company, in order to raise the money and funds necessary and required to enable it to construct said water works and to carry out and perform its agreements aforesaid with said city, did, on or about the eighth day of November, 1883, by certain resolutions of its board of directors, duly passed and adopted, and which resolutions are hereinafter referred to, determine to borrow the sum of $70,000 for the purpose aforesaid, and, in order to accomplish that end, to make and issue its seventy negotiable bonds of $1,000 each, payable at the time and in the manner hereinafter specified, and to sell and dispose of the same and apply the
9 proceeds thereof to the construction of said works, and to secure the payment of said bonds and the interest thereon by a first mortgage or deed of trust of all the works, lands, property, franchises, and effects then owned or which should thereafter be owned by said water works company and upon the water rents and income that should accrue to it or arise from its said water works, and that said mortgage should be executed and delivered to your orator, as trustee for the purchasers and holders of said bonds, to receive the rents and income of said water works and to dispose of such mortgaged property and franchises when necessary for the payment of said bonds and the interest thereon and to protect and manage said security for the benefit of such bondholders.

10th. And your orator further states and charges that afterwards and on, to wit, the ninth day of November, 1883, at a meeting of the stockholders of said Grand Haven water works, held in said city of

Grand Haven, at which all of said stockholders were present and voting, they duly approved and ratified the action of said directors in adopting the resolutions aforesaid and all the measures therein proposed, and duly authorized said water works company to make the said loan and to execute and deliver the said bonds and mortgages above mentioned, and to perform and carry into effect each and all of the measures set forth and proposed in said resolutions of said board of directors; a copy of which said resolutions of said board of directors and of the said resolution of said stockholders ratifying and approving the same *are* attached to a copy of the mortgage authorized by said resolutions and executed in accordance therewith, as hereinafter stated, and which said copies of said resolutions and mortgage, attached together as aforesaid, are hereto annexed and are together marked "Schedule F" and are here made a part of this bill and the allegations thereof.

10 11th. And your orator further states to the court and charges that afterwards and on or about the 13th day of November, 1883, the said Grand Haven water works, by its president and secretary, in pursuance and by the authority of and in accordance with the said resolutions of said board of directors and the directions therein contained, and in order to raise money for the purposes aforesaid, made and executed its seventy bonds, bearing date on the 13th day of November, 1883, for $1,000 each, and bearing interest at the rate of six per cent per annum and payable to bearer on the 15th day of January, 1904, which bonds are more particularly described in the copy of the mortgage included in said Schedule F hereto attached; which said bonds were then delivered to your orator, as trustee as aforesaid, to be sold and disposed of to raise money to be used for the purposes aforesaid.

12th. And your orator further states and charges that at the same time of making and executing said bonds the said Grand Haven water works, in order to secure the payment of the principal and interest of said bonds and the costs and expenses of the execution of said trust so confided to your orator, did, by its president and secretary, in pursuance and by the authority of and in accordance with the said resolutions of said board of directors, execute and deliver its deed of trust or mortgage, dated on said 13th day of November, 1883, to your orator as trustee and in trust for the purchasers and holders of said bonds, wherein and whereby the said Grand Haven water works mortgaged to your orator, its successors and assigns, as trustee and in trust for the benefit and security of said bondholders all of its real and personal estate, buildings, erections, machinery, pipes, and the appurtenances thereto situate and being at the city of Grand Haven or elsewhere, and all its water works, plant, pipes, mains, hydrants,

11 stops, gates, and water works then in process of construction, or thereafter to be constructed or acquired, and all of its rights, privileges, and franchises then owned or acquired or thereafter to be owned or acquired by it, together also with all the income, rents, issues, and profits arising or thereafter to arise or to accrue from any and all of the property, rights, assets, privileges,

and effects then owned or acquired or thereafter to be acquired by it and so mortgaged as aforesaid in trust for the purpose, among other things, to take, collect, and receive the rents, issues, income, and profits of said water works property, franchises, and effects so mortgaged and pledged or thereafter to be acquired and apply the same or so much thereof as should be required for that purpose to the payment of the interest upon said bonds and the expenses of executing said trust, and, if necessary, to sell and dispose of the property, effects, and franchises so mortgaged and pledged for the purpose of paying the principal and interest of said bonds and the expenses aforesaid. For a more particular description of the property, rights, franchises, rents, profits, and effects so as aforesaid conveyed and mortgaged or intended so to be, and of the purposes, objects, conditions, and terms of said mortgage and the trust therein created and declared, and of the duties and obligations of your orator as trustee under said mortgage, reference is here made to said mortgage and to the record thereof, and to the copy of said mortgage attached to and included in the said "Schedule F" hereto annexed, and to the copy of said resolutions authorizing the making and delivery of said bonds and mortgage, which copy of said resolutions, as hereinbefore stated, are also included in said "Schedule F" and which said copies of said mortgage and resolutions are here made a part of this bill as aforesaid.

12 And your orator further says that the execution of said mortgage was duly acknowledged by the grantor therein, and that the acceptance of the trust therein by your orator has been duly made by your orator upon said mortgage, and that said mortgage was duly delivered to your orator, and has been duly recorded in the office of the register of deeds in and for the county of Ottawa, where said city of Grand Haven is located, and that immediately upon the delivery of said mortgage and the acceptance of the trusts thereof as aforesaid your orator entered upon the execution of said trusts and the discharge of the duties required and imposed by the acceptance thereof, and that your orator ever since has been and still is engaged in the execution of said trust and in discharge of the duties required and imposed thereby as aforesaid, and that it files this bill as such trustee and in behalf of the holders of the bonds secured by said mortgage and at their request for the purpose of preserving and protecting their rights and interest under and by virtue of the said mortgage security so executed for their benefit and security as aforesaid.

13th. And your orator further states and charges that all of said bonds have been sold and disposed of to purchasers who bought and paid for them in good faith, and that the money and proceeds received for said bonds have been applied to the purchase of material and machinery for and in the building and construction of said water works for the supply of water to the said city of Grand Haven and the inhabitants thereof in pursuance of the requirements of the said contract with said city, and that said bonds were all so sold and disposed of prior to December 1st, 1884.

And that said bonds are still outstanding and unpaid and held

by purchasers who have acquired them in good faith and for value and in reliance upon the security of said mortgage and in reliance upon the said resolution of said common council of the 12th
13 of April, 1883, wherein said common council declared that it was inexpedient for said city to build water works for supplying itself and the inhabitants thereof with water, and therefore that said city would not impair and destroy the value of the works of said company and thereby impair and destroy the value of said mortgage security by building itself other water works in said city, and in reliance also upon the fact that the laws of the State required of said city that it should make such declaration before granting to any company the right to construct such works, and in reliance upon the enjoyment by said water works company of the rights, privileges, and benefits granted it by said city as aforesaid and in pursuance of the passage of said resolution and by the said agreement and proceedings of said common council, whereby said company would be able to maintain the value of said mortgage security and to pay the said bonds secured thereby.

That said mortgage still remains in full force in the hands of your orator as such trustee as aforesaid as a security for the payment of said bonds and the interest thereon, and that large amounts of interest accrued upon said bonds, which still remain in arrears and unpaid.

14th. And your orator further states and charges that in addition to the said moneys loaned or obtained upon said bonds as aforesaid the said water works company, in reliance upon the benefits of the rights and privileges granted to it as aforesaid of furnishing water to said city and to the inhabitants thereof from its said water works during the time in that behalf stipulated in said contract, has expended other large sums of money in building and constructing its said water works and in laying pipe and placing hydrants in the streets of said city for the purpose of furnishing and supplying water to said city and its inhabitants in pursuance of said contract and agreements between the said water works company and said
14 city, and that from and ever since the time of the construction and completion of said water works, on the first of November, 1884, as aforesaid, the said city has accepted, received, and used water from said works for the use of its streets, and for the use of such public buildings as it has desired, and for the use of its fire department, and for the extinguishment of fires, and for the protection of said city and the property therein from loss and injury by fire, and for such other purposes and uses as it has desired and is still so using said water, and that ever since the completion of said works as aforesaid the said Grand Haven water works has, as hereinbefore stated, furnished an adequate supply of water from its said works to said city for the uses and purposes aforesaid in pursuance of and in accordance with its said contract with said city and also to the inhabitants of said city who have desired to use the same, and that ever since the construction of said works it always has been able, ready, and willing and still is able, ready, and willing so to furnish an adequate supply of water to said city and to its in-

habitants in pursuance to the contract and agreement aforesaid and in accordance with the terms thereof and is now so doing and intends to continue so to do.

15th. And your orator further says and charges that said city, by means of said resolution of its common council, and by means of its said grant of the privileges and franchises so as aforesaid granted by it to said water works company, and by its said agreement to take and receive water from said company for the use of said city, and especially by the passage of said resolution declaring it inexpedient for said city to construct said water works itself, invited and held out inducements to and thereby induced the said water works company to invest and expend its funds and means in the construction and building of its said works
15 for supplying water to said city and its inhabitants, and thereby gave it to understand and believe and to be assured and led and induced it to construct said works upon the understanding, belief, and assurance that so long as it was able, ready, and willing to furnish said city and its inhabitants with an adequate supply of water in pursuance of and in accordance with said contract that said city would not impair or destroy the value of its said works by constructing and maintaining other water works itself for the supplying of water in said city, and thereby led and induced the holders of said bonds to purchase and invest their money therein upon the security of said mortgage.

16th. And your orator further charges that said city, by said resolution of the 12th of April, 1883, so passed by said common council as aforesaid, and by its grant of the rights, privileges, and franchises so granted to said water works company as hereinbefore set forth, and by its said contract and agreement with said water works company, so made as aforesaid, virtually and in effect promised and agreed to and with said water works company that in consideration of its constructing said water works and furnishing and supplying said city and the inhabitants thereof with water according to and in compliance with its said agreement during the time in that behalf in said contract mentioned, that it, said water works company, should during such time have and enjoy the rights and privileges of furnishing and supplying water from its works to said city and the inhabitants thereof and the benefits thereof, and that during such time the said city would not build or construct water works in said city or itself supply said city and the inhabitants thereof with water, and that the violation by the city of such promise and agreement on its part by building and constructing other water works and supplying itself and its inhabitants with water therefrom would greatly damage and depreciate the value of the
16 water works of the company, and consequently would greatly depreciate the value of such mortgage security, to the great loss and damage of said bondholders.

17th. And your orator further states and charges that the population of said city is not sufficiently large and the quantity of water required for the use of said city and its inhabitants is not sufficient to warrant the construction and maintenance of two systems of

water works to supply the same, and that the rental agreed to be paid by said city to said water works company is not, even if paid, without the patronage and water rental from a very considerable number of the inhabitants of said city sufficient to pay the expense of operating said water works and the annual interest on said outstanding bonds.

18th. And your orator further states and charges that notwithstanding the promises and agreements made and the inducements and assurances so as aforesaid held out by said city to induce said water works company to construct its said water works, and whereby it was induced to construct and put the same in operation, and whereby the said bondholders were also induced to advance their money for the construction of said works upon the security of said mortgage thereon as aforesad, and notwithstanding that ever since the construction of said water works the said water works company has supplied said city and the inhabitants thereof or such of them as desired the same with water from said works, as hereinbefore stated, and is still continuing to do so, and for which said city has never paid, and now refuses to make any payment, and notwithstanding that said water works company, at all times since the construction of its said works, has been and still is able, ready, and willing to supply said city and its inhabitants with water according to its said agreement with said city, as hereinbefore stated, and notwithstanding the said agreement on the part of said city to take and receive its water supply from said water works company and to pay for the same as hereinbefore stated, yet your orator says and charges that the common council of said city has lately and within a short time last past given out that it intends to and will construct and cause to be constructed and maintained at the expense of said city another system of water works therein for the purpose of supplying said city and the inhabitants thereof with water for the extinguishment of fires and for domestic and other uses and purposes, and further says that said city, by its common council, is now proceeding to carry out such purpose and to construct such water works, and is collecting and procuring or causing pipe and other material to be collected and procured for that purpose; that said common council has made some arrangement or agreement with said Alvan L. Holmes whereby it has employed him to lay water pipe in the streets of said city and to proceed with the construction of such water works; that in the pursuance of such employment said Holmes has commenced to lay water mains and pipes in the said streets, and has already laid down 1,200 or 1,500 feet of pipe in one of the streets already occupied by the water pipes of said water works company, from which said company, ever since the construction of its works, has been and still is furnishing water to the inhabitants along the line thereof and to the hydrants thereon for the use of said city; that said common council has given out that it intends to and will extend the pipes and mains of such new works and furnish water throughout the whole city and in all the streets and places occupied by the pipes and mains of said water works company; that said

17

council has commenced to furnish water from pipes so laid by said Holmes to some of the residents along the line thereof, and is causing efforts to be made to persuade and induce those who are
18 receiving their water supply from the works of said company to abandon said company and to take their water supply from said city water works upon the promise and assurance that said city will furnish water to them at rates and prices greatly below the rates and prices charged by said water works company; and, in order to induce customers receiving their water supply from said water works company to abandon said company and to take their water supply from the said new works, the said city has fixed upon and published a scale of rates at which it will furnish water to citizens greatly below the lowest average rates charged by said water works companies throughout the State furnishing water under like circumstances and conditions, and, as your orator is informed and believes, greatly below the cost to the city of furnishing the same; and your orator charges that the water rates charged by said company are not excessive and are not sufficient, if water was taken generally, together with the sum agreed to be paid by said city, to enable said company to realize an annual dividend of ten per cent. upon its capital stock after paying necessary charges and expenses, interest on money borrowed, and a five-per-cent. sinking fund for the extinguishment of its funded debt.

19th. And your orator charges that said city, by its common council, intends to and will, unless restrained by the injunction of this court, construct works and lay water pipes in said streets for the purpose of supplying and will supply water therefrom for the use of said city and to the inhabitants thereof, to the great and irreparable injury and depreciation of said mortgage security and the consequent loss and damage to said bondholders.

20th. And your orator further shows that the water supply for the said works so being constructed by said city as aforesaid is drawn from the same sources as the water furnished by said water works company, viz., in part from drive-wells, so called, lo-
19 cated within said city and in part from said river adjacent to said city.

And your orator further charges that there is no necessity or need of the construction of said works now being constructed by said city.

That said city, by means of its said contract and agreement with said water works company and by means of the said water works which, by the resolution of the 12th of April, 1883, and by said contract and agreement, it induced said company to build and construct, has already furnished and provided itself and the inhabitants of said city with a supply of good and wholesome water, adequate and suitable for all uses and purposes for which said city and its inhabitants require a supply of water from water works.

And that said city is estopped from constructing any water works in said city for the purpose of supplying water therefrom so long as the said water works company, during the life of its said agreement with said city, is able, ready, and willing and proposes to supply

water to said city and the inhabitants thereof under and in accordance with its said agreement with said city.

21st. And your orator further states and charges that the said water works company, the said Grand Haven water works, has no property or effects except that covered by and included in said mortgage and the rents and income therefrom so pledged in said mortgage as aforesaid, and that said bondholders are compelled to rely for their payment upon said mortgaged property and the income therefrom and the due preservation and protection thereof; and further says that if said city shall now construct and maintain another system of water works, as now intended by said common council as aforesaid, and shall use the same in supplying water in said city it will greatly injure and depreciate the value not only of the said works of said water works company, but will greatly depreciate and injure and to a great extent destroy the said mortgage security of said bondholders and subject them to great loss and injury thereby and jeopardize the payment of their said bonds and the interest thereon.

22nd. And your orator shows that had it not been for the inducements and assurances and promises so held out as aforesaid by said city to said water works company and for the said understanding and belief so as aforesaid given and induced by the said acts and resolutions of said common council the said water works company would not have constructed said works and invested its money therein or subjected itself to the loss and damage which it must and will suffer if said city shall now construct and maintain other water works in said city, as now intended by said common council; nor would said bondholders have purchased and advanced their money upon said bonds upon the security of said mortgage and thereby subjected themselves to the loss and damage which they will sustain by the depreciation of their mortgage security if said city shall now construct such other water works therein.

23rd. And your orator further charges that if, after holding out to said water works company the assurances and inducements to construct its said works, as hereinbefore mentioned, and after declaring by resolution as aforesaid that it was inexpedient for said city to build such works and after said water works company, led by such inducements as aforesaid, has constructed its said works and after the said bondholders have advanced their money used in constructing said works upon the security of said mortgage, and if while said water works company is supplying said city and its inhabitants with water therefrom, and while it is able, ready, and willing at all times to so supply water from its said works in accordance with its contract with said city as it now is and proposes to do, the said city shall itself construct water works and supply water in said city therefrom, as is now proposed and intended by said common council as aforesaid, such act on the part of the city will be in bad faith toward said bondholders, and any injury and depreciation in the value of said works and of said mortgage security so caused by said city will be fraudulent and a great wrong and injury to said bondholders.

And your orator further shows that it has caused application to be made to the said Grand Haven water works to take measures to prevent such action by said city and that said Grand Haven water works refuses so to do.

24th. And your orator further shows that the amount in controversy herein and for which this suit is brought exceeds the sum or value of two thousand dollars, exclusive of interest and costs.

25th. In consideration whereof, and forasmuch as your orator is remediless at the common law and can only be relieved in a court of equity—

To the end, therefore, that the said defendants herein, the said City of Grand Haven and Alvah L. Holmes and said Grand Haven Water Works, may, if they can, show why your orator should not have the relief herein prayed, and may without oath (their answer and the answer of each of them on oath being hereby expressly waived pursuant to general equity rule 41) full, true, direct, and perfect answer make to all and singular the matters stated and charged in this bill;

And that the said defendants, the said City of Grand Haven and Alvah L. Holmes, their attorneys, servants, agents, and employees, and each of them may be perpetually restrained by the injunction of this honorable court from further constructing, building, or further proceeding with the construction or building or enlarging of
22 any water works in the city of Grand Haven for the purpose of supplying the said city and the inhabitants thereof or either said city or its inhabitants or any of them with water, and from extending or laying any water pipe or water mains in the streets, alleys, public places, or elsewhere in said city of Grand Haven to be used or for the purpose of being used as a part of or in connection with any water works or system of water works for the purpose of furnishing or supplying water for the use of said city or any of the inhabitants thereof or for the supplying or distribution of water for any purpose from the water works belonging to or being built or constructed or extended by said city or by its authority, procurement, or permission or from any other water works in said city, and from connecting the water pipes or water mains recently and within the last two months laid in the street- of sai l city by or under the supervision or direction of said defendants or either of them or by the authority or procurement of either of them with any residence, building, or structure in said city, and from furnishing or supplying water through said last-mentioned pipes or mains to any person or inhabitant in said city or to any building or structure therein;

And that pending this suit a temporary writ of injunction may be issued from this court against the said defendants herein, restraining and enjoining them and each of them and their servants, agents, and employees and each of them as hereinbefore prayed;

And that your orator may have such other and further relief in the premises as the nature of the case may require and as may be agreeable to equity and good conscience—

May it please the court, the premises being considered, to grant

unto your orator the writ of injunction issuing out of and under the seal of said court directed to the said city of Grand Haven
23 and the said Alvah L. Holmes and their and each of their officers, attorneys, solicitors, counselors, servants, agents, and employees, restraining and enjoining them and each of them as hereinbefore prayed until the further order of the court in the premises.

May it further please the court to grant unto your orator the writ of subpœna issuing out of and under the seal of this honorable court directed to the said defendants, the said City of Grand Haven, and the said Alvah L. Holmes and the said Grand Haven Water Works, and each of them, and therein and thereby commanding them and each of them by a certain day and under a certain penalty to be and appear before this honorable court, then and there to answer this your orator's bill of complaint; and, further, to stand to and abide by such order and decree as this court may make in the premises and as shall be agreeable to equity.

And your orator will ever pray, etc.

BOSTON SAFE DEPOSIT AND TRUST COMPANY,
By W. A. UNDERWOOD, *Its Solicitor.*

W. A. UNDERWOOD,
ANDREW HOWELL,
*Solicitors for Complainant and of Counsel.*

UNITED STATES OF AMERICA, } ss:
*Western District of Michigan,* }

William A. Underwood, of the city of Detroit, in the said county of Wayne, being duly sworn, deposes and says that he is an attorney and counselor at law and a solicitor and counselor in chancery duly admitted to the Supreme Court of the United States, and that he is the solicitor for the said complainant, Boston Safe Deposit and Trust Company, and has the charge for said Boston Safe Deposit and Trust Company of this controversy with the said city of Grand Haven.

24 This deponent further says that he is authorized to sign the said bill for the said Boston Safe Deposit and Trust Company and to make oath to the same.

This deponent further says that he has read the said foregoing bill and knows its contents, and that the same so far as the allegations of said bill are upon knowledge are true, and so far as the same are upon information and belief this deponent believes the same to be true.

And further deponent saith not.

WILLIAM A. UNDERWOOD.

Subscribed and sworn to before me this first day of November, A. D. 1887.

JOHN McQUEWAN,
*Clerk U. S. District Court, West. Dist. of Mich.*

SCHEDULE A.

(*Resolution of the Common Council of Grand Haven, Passed April 12th*, 1883.)

"Resolved, That it is expedient to have constructed water works for the purpose of supplying the city of Grand Haven and the inhabitants thereof with water for fire, domestic, and other purposes, but that it is inexpedient for the city of Grand Haven under the power granted in the charter to build such works."

25 SCHEDULE B.

*Water Works Contract.*

This contract made the eighth day of November, 1883, between Grand Haven water works of Grand Haven, Michigan, a corporation organized, existing and doing business at the said Grand Haven, under and by virtue of the laws of this State, party of the first part, and the city of Grand Haven, a municipal corporation created by the laws of the State of Michigan, party of the second part: witnesseth, as follows, to wit:

The said Grand Haven water works, for and in consideration of the franchise to be granted to it, water to be rented of it, and the covenants and promises otherwise to be performed by the said party of the second part, hereby agrees to build and erect water works and to furnish water to the said city of Grand Haven to the extent, of the quality and upon the terms and under the circumstances specified in the proposition of the S. L. Wiley Construction Company presented to the mayor and common council of the said city of Grand Haven on the 25th day of September, 1883, which said proposition was adopted by said first party in all things, and a copy of which is hereto attached and made a part of this contract: and said first party further agrees to have said water works completed and in full and complete running order before the first day of July, 1884; and said first party further agrees to indemnify and hold said second party harmless from any and all damages that may result from injuries occasioned by ditches and excavations made by it in putting in said water works and the pipes connected therewith and after the laying of said pipes and water mains to leave the streets of said city in a condition acceptable to the committee on streets, roads and bridges thereof.

Said second party upon its part, for and in consideration
26 of the covenants and promises of said first party, hereinbefore mentioned on its part to be performed, hereby grants and gives to said first party the right to build and erect its works, and to lay its pipes in the streets, lanes, alleys, avenues, docks and other public places in said city and upon the performance of this contract by said first party, agrees to pay to it the sum of four thousand two hundred dollars ($4,200) per year, in equal quarterly payments on

the first days of January, April, July and October in each year: and said second party agrees upon its part, that said proposition of the S. L. Wiley Construction Company shall be a part of this contract and that it will perform all things on its part to be performed as therein specified.

In witness whereof, the said party of the first part has caused its seal to be hereto affixed and this contract to be signed by its president and secretary: and the said party of the second part has caused its seal to be affixed hereto and this contract to be signed by its mayor and recorder, duly authorized by resolution of its common council, this eighth day of November, A. D. 1883.

JAMES A. NORTON,
*President Grand Haven Water Works.*
T. A. TAYLOR,
*Secretary Grand Haven Water Works.*
H. C. AKELY,
*Mayor of the City of Grand Haven.*
CHAS. T. PAGELSON,
*Recorder of the City of Grand Haven.*

27 To the honorable mayor and common council of Grand Haven, Michigan:

*Proposition S. L. Wiley Construction Company.*

To the honorable mayor and common council of Grand Haven, Michigan.

GENTLEMEN: The S. L. Wiley Construction Company, of Greenfield, Mass., a corporation duly organized under the laws of Mass., for the especial construction of water works, understanding that it is desired on the part of the common council to negotiate for the construction of a system of water works in Grand Haven, beg leave to submit herewith a proposition for your consideration.

Organization.

We will, if granted a franchise, organize a company in accordance with the requirements of your State statutes, and do all that may be necessary to be done in such cases under your charter and laws.

Water supply.

We will locate and establish a good and sufficient water supply for fire, mechanical, manufacturing and domestic purposes, and said water shall not be deleterious to the health of those who may use it.

Source of water supply.

The source of water supply shall be from such point or place as shall best subserve the joint interest of the city of Grand Haven and the company, but it shall at all times be ample for all the purposes contemplated.

Wells, filters, &c.

We will establish wells of sufficient capacity either open or driven, and construct all needful filters or infiltration galleries, the city in no case to be liable for infringement of patents of driven or filtered wells.

28 Pumps and machinery.

We will set and furnish a set of pumping engines that shall be modern, capable and durable, and sufficiently massive—and duplicate—with a combined capacity of one and one-half millions of gallons of water in every twenty-four hours. And the arrangements shall be such as to operate separately or combined, so that no accident to the one can endanger the city or interfere with the supply of private consumers.

Pressure power.

The pressure power of the pumping engines shall be sufficient and equivalent to throw six (6) one-inch streams to a perpendicular hight of one hundred feet simultaneously from hydrants situated upon the line of piping system at any different points in the city, high or low levels, mutually agreed upon.

Pumping stations and buildings.

We will establish a pumping station at such point within the city, looking to the very best interests of all concerned, as may be practicable, and erect thereon fine, commodious and ornamental buildings, comparatively fire-proof, of entire brick or stone with slate or metal roof, and such buildings shall be a credit alike to the city and the company.

Plan of piping system.

We will make and submit to the council a plan of the piping system prior to entering upon the work, showing the length of system, location of mains and pipes, with schedule showing size, diameter, &c., of all the pipe to be laid, and this plan shall be consistent with the laws regulating hydraulic pressure and delivery and satisfactory to the council.

Mains and water pipes.

29 We will furnish and lay down mains and water pipes in all the streets, lanes, alleys, avenues, docks, and public places required by plan, ranging in diameter, as follows, viz: 12, 10, 8, 6 and 4 inches, and there shall be at least six miles of said mains and water pipes.

Character of mains and pipes.

All mains and water pipes shall be of standard weight and quality of iron, and shall bear an hydraulic test of not less than 300 pounds

to the square inch. If wrought iron is used it shall bear an hydraulic test of 500 pounds and the cast at least 300 pounds to the square inch tested at the place of manufacture.

Boilers.

Will furnish and set and properly encase two return tubular boilers of eighty horse-power capacity or sufficient capacity and power to drive the pumping engines easily and with surety and safety.

Fire pressure.

For the safety of the city and to always guard against the destruction of property, we guarantee a fire pressure at all times almost instantaneous, at least within five minutes after an alarm shall have been given at the pumping station either by bells, electric alarm, telephone, or any practical means the council may adopt.

Hydrants.

Will furnish and set up the piping system at such points as the council may designate, sixty (60) first-class fire hydrants, double nozzled and of modern make and pattern, and all hydrants shall, like the piping, be subject to an hydraulic pressure of 300 pounds to the square inch.

Extension of pipe line.

We will at any time after the original piping system has been laid, extend the pipe line upon demand or request of the council, provided, that every 500 feet of such extension shall yield by hydrant rental a revenue of fifty dollars.

Privileges granted to the city.

The city shall have free use to all water to fill tanks from which to supply the city water carts for street sprinkling, whenever the city shall so elect.

The city shall have free use of all water necessary for cleansing gutters and flushing out the sewers of the city, provided that the said flushing and cleansing shall not occur more than twice in each week and it shall be done under the supervision of the street commissioner or other proper city officer and between the hours of seven and eight o'clock in the forenoon, so as not — interfere with the other uses of the water by the city and the general public, notice to be given to the engineer at the pump-house for necessary pressure.

All city and public school buildings shall have the free use of all water necessary for legitimate uses.

We will supply water free of charge for a city fountain and as many drinking places as the city may choose to erect.

Water to all water tanks from which to water horses shall be supplied free.

All engine and hose houses shall have free water for all legitimate uses therein.

Conditioned, that all places where free water is granted shall be under the supervision of the street commissioner or other designated city official, and subject to the same restrictions and rules as private consumers, so as to prevent waste and consequent damage to the property of the city and company.

Water rates.

The rate of water to private consumers, for mechanical purposes and to manufacturers, shall be fair and equitable and shall
31 not be in excess of the rate charged in any city of like population and under like conditions.

Right of city to purchase.

The city at any time after the expiration of ten (10) years shall have the right by giving twelve months' notice of their intention so to do, to purchase the works at a fair and equitable value of the same at that time, the franchise not to be taken into consideration, but merely the actual value of the machinery, piping system, buildings, &c.

And if a price cannot be mutually agreed upon, then an appraisement shall be made of said works, which shall be in accordance with the laws governing such cases in the State of Michigan.

In consideration of the above we ask the city of Grand Haven to,

First, grant a franchise to the Grand Haven water works, a corporation to be hereafter organized, to lay mains and pipes for the conveying and distribution of water throughout the city of Grand Haven, this franchise to be for a period of twenty-five years.

Second, to pass such ordinances as will protect the machinery, buildings, &c., of the company from injury and destruction by evil and malicious persons, and such other ordinances as will enable us to carry out the provisions of our proposition.

Third, we ask the city to rent of us (60) sixty fire hydrants at an annual rental of ($70) seventy dollars each or a total annual rental of ($4,200) four thousand two hundred dollars, said rental to commence upon the location and furnishing water as hereinbefore provided, of each of said hydrants and approval of the common council, payment to be made quarterly on such dates as will best subserve the interests of the city.

Free hydrants.

We agree to give the city the right to put as many fire
32 hydrants upon any existing lines, or extension, at any time during the franchise, as they may deem best, the city paying for such hydrants and setting, but the water shall be furnished for said free hydrants without cost during the franchise.

THE S. L. WILEY CONSTRUCTION COMPANY.
S. L. WILEY, *Pres.*

Grand Haven, Mich., September 25th, 1883.

SCHEDULE F.

Grand Haven Water Works
to
The Boston Safe Deposit Co., Trustee.

Received for record February 14th, A. D. 1884, at 11.45 o'clock a. m.

—— ——, *Register.*

Whereas at a meeting of the directors of the Grand Haven water works, a corporation organized as hereinafter stated, held at the office of George W. McBrid, in the city of Grand Haven, Michigan, Ottawa county, November 8th, A. D. 1883, all the directors representing all the stock of said corporation present.

And whereas at said meeting the following resolutions were duly passed by a unanimous vote of the directors of said corporation, viz:

That whenever it is deemed expedient or necessary the president and the secretary of this corporation be, and they are hereby, authorized and directed to execute and issue the bonds of this corporation in the sum of seventy ($70,000) thousand dollars, secured by a first mortgage or deed of trust upon all the present and future property, rights, and privileges, franchises and assets of the corporation, both that is now owned or may be hereafter acquired by it; said bonds to be of even date with the said mortgage and be payable on the fifteenth day of January, 1904, with interest at the rate of six per cent. per annum, payable semi-annually at the office of the
33 "Boston Safe Deposit and Trust Co.," in the city of Boston, Mass.; said bonds to have proper coupons attached, to be of the denomination of one thousand dollars each, numbered from number one to and including number seventy (70), and shall be redeemed by this corporation at the option of this corporation at any time after five (5) years from their date upon said corporation giving the holders thereof sixty (60) days' notice by advertisement thereof three (3) times in some prominent Boston, Mass., newspaper, which shall be deemed good and sufficient notice.

And the president of the corporation and the secretary thereof are hereby authorized and directed to execute the mortgage or deed of trust necessary to secure said bonds.

Resolved further, That the president or treasurer of this corporation are hereby authorized and directed to sign orders upon the Boston Safe Deposit and Trust Co., of Boston, Mass., in payment for work and material as the work of construction progresses in compliance with the contract or any future contract or contracts that may be made with any one.

And whereas the said Grand Haven water works has entered into a contract with the S. L. Wiley Construction Company of Greenfield, Mass., a corporation organized under the laws of Massachusetts, to construct the water works of this corporation

contemplated by its contract with the city of Grand Haven, Michigan, of the date of November the 8th, 1883, and this board deems it necessary in order to pay for the construction of said works to issue the bonds of this corporation to the amount of seventy thousand ($70,000) dollars, to be secured by a first mortgage or trust deed on all its lands, works, pipes, mains, hydrants, assets, and property to the Boston Safe Deposit and Trust Co., of Boston, Mass., as trustees: Therefore

Resolved, That this corporation, the said Grand Haven
34 water works, issue seventy thousand ($70,000) dollars of bonds; that said bonds be drawn payable to bearer; that they be issued of even date with the mortgage hereinafter mentioned, payable on the 15th day of January, 1904, and bearing six (6) per cent. interest per annum, payable semi-annually, both principal and interest, at the office of the Boston Safe Deposit and Trust Company, of Boston, Mass., each of the said bonds to be of the denomination of one thousand dollars ($1,000) and to have proper coupons attached for each semi-annual instalment of interest and to be numbered consecutively from one to and including seventy (70), and which bonds shall be redeemable by this corporation at any time after the expiration of five (5) years after the execution of said bonds and mortgage at the place of payment, at the option of the corporation, giving to the holders of such bonds sixty (60) days' notice by three (3) publications thereof in some prominent newspaper in Boston, Mass.

Resolved, That such bonds so to be issued shall be engraved and shall be signed by the president and countersigned by the secretary of this corporation and attested by its common seal, in substantially the following form:

UNITED STATES OF AMERICA.

No. —. $1,000.

Grand Haven water works.

STATE OF MICHIGAN, *City of Grand Haven.*

*Six Per Cent. Bond.*

On the fifteenth day of January, A. D. 1904, for value received Grand Haven water works promises to pay to bearer one thousand dollars with interest at the rate of six per cent. per annum, payable semi-annually on the fifteenth days of January and July on presentation and surrender of the coupons hereto annexed, as
35 they respectively become due: principal and interest payable in lawful money of the United States at the Boston Safe Deposit and Trust Company in the city of Boston.

Grand Haven water works reserves the right to pay this bond at any time after five years from its date on giving sixty days' notice, and a notice published three times in a newspaper in Boston, Mass., that the bond is called in shall be sufficient and after the date at

which this bond shall be by such notice called in, interest shall cease.

This bond is one of a series of seventy of like tenor and date amounting to the sum of seventy thousand dollars, first mortgage bonds issued by the Grand Haven water works and secured by a duly authorized executed and recorded deed of trust, covering the franchises and property and income, including water rents due and to become due of said corporation, made to said Boston Safe Deposit and Trust Company, of Boston, Massachusetts, trustee.

In witness whereof, "Grand Haven water works" has caused this negotiable bond to be executed by its president, who covenants that he is duly authorized in this behalf, and countersigned by its secretary and its corporate seal to be hereunto affixed, this — day of ——, A. D. 1883, in the city of Grand Haven, Michigan.

—— ——, *President.*

Attest: —— ——, *Secretary.*

That, to secure the payment of the principal and interest of the said bonds and all the lawful expenses incurred in the collection thereof, this corporation shall execute its mortgage or deed of trust to the Boston Safe Deposit and Trust Company, of Boston, Mass., as trustee, of and upon the lands, franchises, rights, and privileges, property, assets, income, and effects of this corporation now owned or hereafter to be acquired by it, whether real, personal, or
36 mixed, and that such mortgage or deed of trust shall contain a covenant of further assurance by which this corporation shall covenant and agree that the corporation will hereafter make, execute, and deliver to said trustee such other and further conveyances, mortgages, and instruments in writing as said trustees shall reasonably deem necessary to fully carry out the intent and meaning of said first mortgage or deed of trust and as will secure to said trustee the water rents hereafter pledged, and especially that upon the request of said trustee that it will execute and cause to be recorded at its own expense further mortgages or deeds of trust to said trustee of such property as it may acquire after the date hereof and as may be necessary fully to supplement and convey to said trustee all the security for said bonds intended or meant by said first mortgage to be conveyed as will enable said trustee, in case it shall deem it necessary to do so, to take immediate possession of all mortgage property and sue for, collect, and receipt for any water rents which may hereafter become due this corporation from any and all persons and corporations, including the city of Grand Haven, Michigan, under its contract, which said water rents are hereby pledged to said trustee, such further mortgages or deeds of trust to be in all respects like the said mortgage or deed of trust first to be executed and be in confirmation of and supplemental to the lien of such first executed mortgage on such hereafter-acquired property intended to be conveyed by said mortgage first executed, excepting that nothing in these resolutions or in said mortgage contained shall preclude said trustee from demanding and being entitled to such instruments in writing as shall vest in it possession of the

mortgaged premises or of any other mortgaged property, real or personal, and the title to the income of or water *rates* to become due to this corporation, and all said mortgages shall contain the
37 usual covenants of seizure and warranty and shall provide for the payment of expenses of foreclosure and sale; and, further, that the whole of the principal of said indebtedness secured thereby shall become due and payable and the said trustee or its successor may proceed to foreclose the same for the whole amount of such indebtedness whenever default shall be made in the payment of any installment of interest due for thirty days after the same shall become due and payable.

Resolved, That all the water rental to become due to this corporation from the city of Grand Haven under its contract with this corporation of the date of November 8th, 1883, or any other or future contract with said city during the continuance of the indebtedness evidenced by said bonds is hereby pledged to said trustee for the payment of the interest upon such indebtedness.

Resolved, That, the said bonds having been executed and the said first above described mortgage having been duly executed, delivered, and recorded, said bonds shall be deposited with the said Boston Safe *and* Deposit — Company, the said trustee, subject to the order of and to be negotiated and sold by James A. Norton, the president of this corporation and the financial agent thereof, and he, the said Norton, is hereby authorized to negotiate and sell the whole or such part of said bonds as he shall deem necessary for the purpose of the corporation upon the best terms he can obtain therefor, and the moneys received from such sale of said bonds shall be deposited with said trustee, subject to the order of the president, James A. Norton, or the treasurer, W. C. Harris, in payment for construction as the same progresses under such contract or arrangement in regard thereto as the said financial agent shall make with the said trustee, the said Boston Safe Deposit and Trust Company.

Resolved, That each of the coupons to be attached "to the bonds heretofore authorized to be issued" respectively on each bond
38 shall be in the following form, viz:

$30. GRAND HAVEN, MICH., —— —, *U*883.

Grand Haven water works promises to pay to bearer the sum of thirty dollars at the office of the Boston Safe Deposit and Trust Company, in the city of Boston, Mass., for six months' interest due on the fifteenth day of —— on bond No. —.

JAMES A. NORTON, *President.*

Resolved further, That all mortgages or deeds of trust shall provide for the relief of the trustee from its trust in case of its desire to be so relieved and the appointment of a successor in case *of* a vacancy in the office of trustee should exist and such other regulations concerning the exercise of the powers of such trustee as the president of this corporation may deem best to insert in the said mortgage and as are not inconsistent with resolutions heretofore passed; and

Resolved further, That all the water rents to become due to this

corporation from all persons and corporations other than the city of Grand Haven or so much thereof as shall be necessary to make up any deficiency in the amount of the interest which may at any time be due upon such bonds over and above the amount received by such trustee from such water rental from the city of Grand Haven or which may be over and above the amount of such interest which said rental from the city of Grand Haven will pay are hereby pledged to said trustee for the payment of the interest upon such indebtedness.

Resolved further, That the date upon which said seventy thousand dollars ($70,000) of bonds heretofore mentioned shall be issued and the date of said mortgage or trust deed securing the same shall be ——, A. D. 1883.

And whereas, at a meeting of the stockholders of the Grand Haven water works held at the office of George W. McBride, in the
39 city of Grand Haven, Michigan, on the 9th day of November, A. D. 1883, all the stock being present and voting, it was resolved—

That the stockholders do hereby endorse and approve the action of the board of directors of this corporation in part and in whole relating to the issuing of seventy thousand ($70,000) dollars in bonds secured by a mortgage upon all the property, rights, franchises, and privileges of this corporation now owned or that may *be* hereafter be acquired by it for the purpose of borrowing money as defined in resolutions upon pages forty-eight (48), forty-nine (49), fifty (50), fifty-one (51), fifty-two (52), fifty-nine (59), and sixty (60) of this record book, and they are empowered and authorized to determine all matters relating to form of bonds, mortgages, or trust deeds, date of issue and execution of same, and all matters and details therein.

And whereas the said Grand Haven water works is a corporation organized under the provisions of chapter 128 of the Compiled Laws of the State of Michigan for the year 1871, as amended, entitled "Companies for the introduction of water into towns, cities, and villages," being chapter 84 of Howell's Annotated Statutes, and is authorized by law to issue bonds or other evidences of indebtedness, to borrow money, and to execute mortgages or trust deeds, and the said Grand Haven water works has complied with the provisions of law in that behalf, so that it is empowered and authorized to borrow money, to issue the bonds mentioned in said resolutions and hereinafter, to make this mortgage or deed of trust, and is desirous of negotiating its bonds to the amount of seventy thousand ($70,000) dollars and for the purpose of securing the payment thereof desires to execute this mortgage or deed of trust to the said Boston Safe Deposit and Trust Company, of Boston, Mass., as trustee for the holders of said bonds:

Now, therefore, this indenture made this thirtieth day of
40 November, A. D. 1883, by and between the said Grand Haven water works, so being such corporation as aforesaid, of the first part, and the said Boston Safe Deposit and Trust Company, of Boston, Massachusetts, a corporation organized under the

laws of the State of Massachusetts, as trustee, for the holders of said bonds, of the second part, witnesseth:

That the said party of the first part in consideration of the premises, and forasmuch as it has executed seventy (70) negotiable bonds, numbered consecutivel- from one (1) to seventy (70) inclusive, each of the denomination of one thousand ($1,000) dollars, due January 15th, 1904, ninteen hundred and four, bearing interest at the rate of six (6) per cent. per annum, payable semi-annually on the fifteenth days of July and January on the presentation and surrender of the coupons thereto annexed and hereinafter mentioned as they respectively become due, both principal and interest payable in lawful money of the United States at the office of the said Boston Safe Deposit and Trust Company, the said second party, each bond having forty (40) coupons attached thereto, numbered consecutively from one (1) to forty (40) inclusive and each coupon being the pr-mise of the first party to pay the semi-annual instalment of interest therein mentioned and the said coupon number one (1) being the promise of the first party to pay the interest therein mentioned July 15th, 1884, and each of the said bonds and coupons being the form set out herein in the recital of the resolutions of the board of directors of the first part hereto, and is desirous of selling and negotiating and selling the same, and of securing the payment thereof, for the purpose of so doing hath granted, bargained, sold, remised, released, enfeoffed and confirmed and by these presents doth grant, bargain, sell, remise, release, enfeoff, alien and confirm unto the said party of the second
41 part, its successors and assigns, all and singular that piece or parcel of land situate, lying and being in the city of Grand Haven, county of Ottawa, State of Michigan, and described as follows, viz: A part of the southwest fraction of section (22) twenty-two, township (8) eight north of range sixteen (16) west according to United States survey, bounded as follows, that is to say: Commencing at a point (330) three hundred and thirty feet east and (66) sixty-six feet north of an iron stake at the intersection of Beech Tree street and Washington avenue, running thence east at right angles with said Beech Tree street (330) three hundred and thirty feet, thence south parallel with said Beech Tree street (132) one hundred and thirty-two feet, thence west at right angles with said Beech Tree street (330) three hundred and thirty feet, thence north (132) one hundred and thirty-two feet to the place of beginning, containing one acre of land, with all the buildings and appurtenances thereon and thereto belonging, together with all the wells, buildings, erections, machinery, pipes and works of whatsoever kind or description, now on said premises or hereafter to be placed thereon and all and singular, the hereditaments and appurtenances thereunto belonging or in anywise appertaining, and also, all and singular, the works, pipes, mains, hydrants, stop gates, connections and plant of the said party of the first part, now in said city of Grand Haven in process of construction or thereafter to be constructed or acquired; and all the income, rents, issues and profits to be received therefrom and all the lands and property and assets of said Grand Haven later

works, of whatsoever kind and description, wherever situate, now owned by it or hereafter to be acquired:

And all the franchises, rights and privileges of said first party now held and enjoyed by it or hereafter to be acquired, forever:

To have and to hold the above-bargained premises, prop-
42 erty and assets, franchises, rights and privileges, to the said second party, its successors and assigns, forever; in trust, nevertheless, for the uses and purposes hereinafter mentioned.

And the said party of the first part, for itself, its successors and assigns, for a valuable consideration, the receipt whereof is herein and hereby confessed and acknowledged, doth covenant, grant, bargain and agree to and with the said second party, that it is well seized of the above-granted franchises, rights and privileges, property and assets, of a good, sure and indefeasible title thereto, that the same are free and clear from all incumbrances, and that the same in the quiet and peac-able enjoyment of the said party of the second part, its successors and assigns, the said party of the first part, its successors and assigns, against all and every person lawfully claiming or to claim the same or any part thereof, shall forever warrant and defend.

And for a further valuable consideration to it in hand paid by said second party, receipt whereof is hereby confessed and acknowledged, the said party of the first part fot the further assurance of the said party of the second — and the holders of such bonds, doth convey, grant, bargain and agree with said party of the second part, its successors and assigns, that it will and its successors and assigns shall make, execute and deliver to said party of the second part, its successors and assigns, all such other and further conveyances, mortgages and instruments in writing as said party of the second part shall reasonable deem necessary to fully carry out the meaning and intent of this mortgage and as will secure to the said party of the second part the water rents, incomes, issues and profits hereafter and hereby intended to be conveyed, and especially upon request of the party of the second part it will and its successors shall execute
43 and cause to be recorded at its own expense, all such further mortgages or deeds to said second party of such property, rights, privileges and franchises as it may acquire after the date hereof, and as may be necessary to supplement and make complete this mortgage, and to fully convey to said second party all the security for said bonds intended or meant by this mortgage to be conveyed, and as will enable said second party, its successors and assigns, in case it or they shall deem it necessary so to do, or in case of any default entitling it to do so, to sue for, collect and receipt for any water rates which may hereafter become due to this corporation from any source whatsoever or which may become due its successors or assigns, and that such further mortgages or deeds of trust shall be in all respects as nearly as may be, like this mortgage and to be in confirmation of and supplemental to the lien of this mortgage on such hereafter acquired property intended to be conveyed by this mortgage.

Provided always, and these presents are upon these express con-

ditions, that if the said party of the first part shall and do well and truly pay or cause to be paid to the holder thereof all and singular, the said seventy (70) bonds hereinbefore mentioned, which shall be at the time oustanding and negotiated, principal and interest, at the several times therein mentioned for the payment thereof, according to the terms and provisions of said bonds severally and the coupons respectively attached thereto, then these presents and the said bonds and coupons thereunto belonging shall cease and be null and void: and it is hereby expressly agreed that should any default be made in the payment of said interest or any part thereof, on any day whereon the same is made payable as above expressed,
and should the same remain unpaid and in arrears for the
44 space of (30) thirty days, then and from thenceforth, that is
to say after the lapse of (30) days, so much of the aforesaid principal sum of seventy ($70,000) thousand dollars as remains unpaid, with all arrearages of interest thereon, shall at the option of the said party of the second part, its successors and assigns, become and be due and payable immediately thereafter, although the period above and in said bonds limited for the payment thereof may not have expired, anything hereinbefore or in said bonds contained to the contrary thereof in anywise notwithstanding.

And it is also agreed, that at any time the said trustee, the second party hereto, its successors or assigns, shall deem the security for the payment of the debt evidenced by said bonds and coupons is impaired or in danger of being impaired, or that there is any reasonable probability that the next installment of interest on said indebtedness will not be fully paid, or if at any time any interest or any part of the interest on any of said bonds shall be in arrears, it is hereby authorized and empowered to take, receive, sue for and collect the water rents thereafter to become due and payable to said first party, its successors or assigns, from the city of Grand Haven, under the present contract between the said first party and said city of Grand Haven, or any other, further or future contracts between said first party, its successors and assigns, and the said city of Grand Haven, by first giving said first party and said city of Grand Haven five days' notice of its intention to do so: and in case such rental from the said city of Grand Haven shall not be sufficient fully for the purposes aforesaid, then the said second party, its successors and assigns, is hereby authorized upon like notice as aforesaid, to said first party and to the person or persons owing such water rental, to take, receive, sue for, prosecute and collect all other water rents due or to
become due to said party of the first part, its successors or
45 assigns, from any other person or persons or corporations
whomsoever, and apply the same for the purposes aforesaid, or so much thereof as shall be necessary therefor.

And it is further agreed that the said Boston Safe Deposit and Trust Company or any future trustee, under this indenture, may assign and discharge itself or himself of the trusts herein created by notice in writing to the party of the first part sixty (60) days before said resignation shall take effect or by such shorter notice as the party of the first part may deem adequate and upon proper account-

ing in respect to its or his trusteeship and upon execution of the conveyances hereinafter required.

And any vacancy in the office of any such trustee however or whenever occurring, may be filled by appointment by the party of the first part concurred in by a majority interest of the holders of bonds hereby secured, which appointment shall be in writing and be filed with the new trustee and the party of the first part: and thereupon all the powers and authorities herein granted to or conferred upon the party of the second part and all the rights, interests and estates herein conveyed to said party of the second part and requisite to enable it to execute the purposes of these trusts, shall become vested in the new trustee appointed as above without any further conveyance: but any trustee so resigning or vacating its or his office in any manner, shall execute such deeds of conveyance or other instruments as may be necessary to vest all its or his interest in said trust property in said new trustee upon the trust herein expressed.

And in case it may at any time hereafter prove impracticable to fill in manner aforesaid any vacancy which may have occurred in said trust, the vacancy may be filled and a new trustee ap-
46 pointed by the circuit court for the county of Ottawa in chancery of the State of Michigan, upon application of any party interested and after such notice as the court may order: such appointment by said court shall vest the mortgaged premises in the trustee so appointed as fully and with the same trusts and powers as if herein expressly appointed: and as part of said decree of appointment said court may direct any such conveyance by any outgoing trustee as may be deemed necessary or convenient.

The party of the second part hereby accepts the trust aforesaid and agrees faithfully to execute the same, but upon the following terms and conditions which are mutually agreed upon by the parties interest herein, to wit:

That the reasonable charges and expenses of executing the trusts including a reasonable compensation to the trustee shall be paid by the party of the first part or otherwise out of the trust estate on which they are hereby charged: and any trustee acting hereunder shall not be required to take measures for the enforcement of this mortgage or to sell the mortgaged premises under the power herein given unless furnished with a reasonable amount of money for these purposes and shall be indemnified against the loss, trouble and expense such trustee may be put to in so doing.

And that in the performance of the duties of the trust the trustee shall be vested with full powers to submit to arbitration all questions of law and fact, and all controversies arising in the execution of the trusts, and to compromise and adjust the same on such terms as the trustee shall deem reasonable: and that any trustee hereunder shall be answerable only for gross negligence and wilful default and shall not be responsible for any omissions or wrongful acts of any counsel, agents or attorneys employed by such
47 trustee for any of the purpsoeses aforesaid when selected in good faith.

But in case of the non-payment of the said bonds and the coupons thereon as they respectively become due or any of the same or of the several sums of money evidenced thereby or any part thereof, principal or interest, at the time, in the manner and at the place above and in said bonds and coupons limited and specified for the payment thereof, then and in such case it shall and may be lawful for the said party of the second part, its successors and assigns, as such trustee as aforesaid, and the said party of the first part doth hereby empower and authorize the said party of the second part, its successors and assigns, as such trustee as aforesaid, to grant, bargain, sell, release and convey the rights, franchises, privileges, premises and assets and property with the appurtenances hereby mortgaged, or intended or meant to be, at public auction or vendue and on such sale to make and execute to the purchaser or purchasers, his, her, its or their heirs, successors and assigns, forever, good, ample and sufficient deed or deeds of conveyance in law pursuant to the statute in such case made and provided: and out of the proceeds thereof to pay the holders of said bonds, if so much there shall be realized on said sale, principal and interest due upon said bonds and the coupons thereto attached, after deducting the lawful costs and charges of such foreclosure and sale, rendering the surplus moneys, if any there should be, to the said party of the first part, its successors and assigns.

In witness whereof the said Grand Haven water works has caused this mortgage to be executed by its president, who covenants that he has sufficient and lawful authority in that behalf.

{Seal of Grand Haven Water Works, Incorporated 1883, Grand Haven, Mich.}

And to be countersigned by its secretary and the common
48 seal to be affixed hereto at the city of Grand Haven, Ottowa county, State of Michigan, this 30th day of November, 1883.

JAMES A. NORTON, *President.*
T. A. TAYLOR, *Secretary.*

Countersigned in presence of—
WM. GATFIELD.
C. FERGUSON.

STATE OF MICHIGAN, } *ss:*
*County of Ottawa,* }

On this 14 day of February, A. D. 1884, before me, a notary public in and for said county, personally appeared James A. Norton and T. A. Taylor, known to me to be the president and secretary respectively of the Grand Haven water works, and severally and respectively acknowledged that they had, as president and secretary of said Grand Haven water works and as its act and deed, executed the foregoing mortgage and affixed thereunto the common seal of said corporation, and that the foregoing mortgage was and is the free act and deed of said corporation.

CHAS. T. PAGELSO,
[SEAL.] *Notary Public, Ottawa Co., Mich.*

The Boston Safe Deposit and Trust Company, party of the second part to the foregoing indenture, has in witness thereof caused the same to be signed in its name and behalf and its corporate seal to be affixed to the same by its president, Frederick M. Stone, hereunto duly empowered, this thirtieth day of November, in the year eighteen hundred and eighty-three.

[Seal of the Boston Safe Deposit and Trust Company.]

BOSTON SAFE DEPOSIT AND TRUST CO.,
By FREDERICK M. STONE, *Pres't.*

In the presence of—
BENJAMIN F. BROOKS.
HENRY G. NICHOLS.

49 COMMONWEALTH OF MASSACHUSETTS, *Suffolk*, } *ss:*

On this ninth day of February, A. D. 1884, before me, a notary public in and for said county, personally appeared Frederick M. Stone, known to me to be the president of the Boston Safe Deposit and Trust Company, and acknowledged that he had as president of said Boston Safe Deposit and Trust Company and as its act and deed executed the foregoing mortgage and affixed thereto the corporate seal of said corporation, and that the foregoing mortgage was and is the free act and deed of said corporation.

[SEAL.] HENRY G. NICHOLS,
*Notary Public.*

COMMONWEALTH OF MASSACHUSETTS, *Suffolk*, } *ss:*

CLERK'S OFFICE, SUPERIOR COURT.

I, Jos A. Willard, clerk of the superior court for said county, the same being a court of record, do hereby certify that Henry G. Nichols, Esq., whose name is subscribed to the proof or acknowledgment of the annexed instrument in writing, was at the time of taking such proof or acknowledgment a notary public in and for the said county, duly commissioned, sworn, and authorized to take the same; and, further, that I am well acquainted with his handwriting, and verily believe that the signature to said proof or acknowledgment is genuine; and, further, that the annexed instrument is executed and acknowledged according to the laws of said Commonwealth.

Witness my hand and seal of said court, at Boston, in said county and Commonwelth, this 11th day of February, A. D. eighteen hundred and eighty-four.

[SEAL.] JOS. A. WILLARD, *Clerk.*

STATE OF MICHIGAN, *County of Ottawa*, } *ss:*

50 I, William F. Kelly, register of deeds in and for said county, do hereby certify that the annexed and foregoing is a true, correct, and compare- copy of a mortgage recorded in

Liber 26 of Mortgages, on page 186, &c., of the records of this office; that it is a correct transcrip- therefrom and of the whole of such original record.

Given under my hand and official seal, at the city of Grand Haven, this 13th day of June, A. D. 1887.

[SEAL.] WILLIAM F. KELLY,
*Register, Ottawa County, Michigan.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Company, complainant, *vs.* City of Grand Haven *et al.*, defendants. Bill of complaint. Filed Nov. 1, 1887. C. L. Fitch, clerk. W. A. Underwood and Andrew Howell, compl't's sol'rs.

51 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Western District of Mich. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Compl't,
*vs.*
CITY OF GRAND HAVEN, ALVAN L. HOLMES, and GRAND HAVEN WATER WORKS, Def'ts.

WESTERN DISTRICT OF MICHIGAN, *ss:*

Seth Moss, of the city of Grand Haven, being first duly sworn, deposes and says that he resides in Grand Haven and has for the space of two years and nine months, ever since the Grand Haven water works have been operated; that he was night engineer at said water works from the time the same began operations, in January, 1885, until October, 1885, when he left the employment of said company.

And this deponent further says that while he was so as aforesaid in the employ of said water works company until in September, 1885, one George Van Patten was superintendent, when he was superseded by A. M. Cosgrove, the present superintendent; that on being so superseded the said Van Patten left the city of Grand Haven and removed to some place in the State of Illinois, as he informed this deponent, and has not to the knowledge of this deponent been back to Grand Haven.

And this deponent further saith that he kept no record of fires which occurred in Grand Haven during the time he was such
52 night engineer; that whenever a fire occurred those in charge of the pump-house made a memorandum of the same and the operations of the pumps and the time of pumping, and delivered the same to said R. Van Patten, but what has become of the same this deponent cannot say, but this deponent knows that fires were of frequent occurrence during said time and that the water from the Grand Haven water works was universally used when the fires were within the limits of the pipes and hydrants of said Grand Haven

water works; that some of said fires were large and serious ones and would have resulted in serious loss had it not been for said water works.

That, as this deponent believes, the first fire which occurred after the test or trial of the works was at the Roman Catholic church on Fulton street, in said city, and which occurred, as this deponent now remembers, the day succeeding said test; that said water works were used on that occasion by the city for the extinguishing of the same, and has been so used ever since for fires.

That while this deponent cannot state the number of fires at which water was so used from said water works by said city exactly during the time from January, 1885, to October, 1885, this deponent estimates the same from his best recollection at twenty; that at none of said fires was there any failure of water or pressure in such amounts and quantities as were needed.

And further deponent saith not.

SETH MOSS.

Subscribed and sworn to before me this 1st day of November, 1887.

J. C. SHINKMAN,
*Notary Public, Kent Co., Mich.*

53 [Endorsed:] No. 918. U. S. circuit court of western dis. of Mich. In equity. Boston Safe Deposit and Trust Company, compl't, *vs.* City of Grand Haven *et al.*, def'ts. Affidavit of Seth Moss. Filed Nov. 1, 1887. C. L. Fitch, clerk. W. A. Underwood & Andrew Howell, compl't's sol'rs.

54 *List of Fires Since September 9th, 1885, and Number of Streams of Water from Grand Haven Water Works.*

| Date of fire. | | | Streams used. |
|---|---|---|---|
| Oct. 8, 1885 | | | 2 |
| Dec. 5, | " | | 2 |
| Dec. 21, | " | | 2 |
| Jan. 16, 1886 | | | 1 |
| Feb. 1, | " | | 5 |
| " 7, | " | | 2 |
| " 28, | " | | 2 |
| March 25, 1886 | | | 2 |
| April 23, | " | | 2 |
| July 21, | " | | 2 |
| Aug. 7, | " | | 2 |
| Aug. 8, | " | | 1 |
| Sept. 12, | " | | 1 |
| " " | " | | 4 |
| " 15, | " | | 2 |
| Oct. —, | " | barn on Pennoyer Ave. | 1 |
| " 29, | " | | 2 |
| Nov. 14, | " | | 2 |

| Date of fire. | Streams used. |
|---|---|
| Dec. 19, 1886 | 3 |
| " 28, " | 2 |
| March 8, 1887 | 1 |
| 55 March 9, 1887 | 1 |
| " 13, " | 3 |
| April 7, 1887 | 3 |
| " 21, " | 2 |
| June 24, " | 1 |
| June 30, " | 1 |
| Aug. 6, " | 1 |
| Aug. 12, " | 1 |
| Sept. 17, " | 1 |
| Oct. 28, " | 1 |

56 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Southern Division of the Western District of Michigan.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAN L. HOLMES, and GRAND HAVEN WATER WORKS, Defendants.

WESTERN DISTRICT OF MICHIGAN, *ss:*

Augustus M. Gosgrove, of the city of Grand Haven, being duly sworn, deposes and says that he is superintendent of the said Grand Haven water works and has been ever since the 9th day of September, 1885, when he became superintendent of said Grand Haven water works.

This deponent further says that the said city of Grand Haven is engaged in laying pipe on the streets of Grand Haven occupied by the pipes of the Grand Haven water works at the rate of about 350 feet per day; that said city has already within a few weeks last past laid about 2,800 feet of such water pipes along and upon the streets occupied by the pipes of the said Grand Haven water works and is preparing and has contracted with said Alvan L. Holmes to lay about 5,000 feet more of such pipe, almost all upon streets occupied with pipe of said Grand Haven water works.

And this deponent further says that annexed hereto is a
57 true statement of the fires at which water from the pipes and hydrants of the Grand Haven water works *have* been used by said city for the extinguishment of fires since he became superintendent of said works; that before he became superintendent of said works, on the day above stated, he is not able to state from his personal knowledge the fires at which the said water was used, but he is informed, and it is a matter generally admitted by every one in Grand Haven, that ever since the Grand Haven water works were opened ready for use the said city has used the same for fires whenever the

same occurred; that by means of said works some very large conflagrations, which would have otherwise been disastrous, have been checked and extinguished.

That the fire of February 1st, 1886, was a very serious one; the works were used by the city for 18 hours, pumping on the fire; from 10 to 12 hours 4 and 5 streams were used, and after that 2 and 3 streams were used; that the pressure had to be reduced by the direction of the chief engineer of the city fire department, and that during all the time he has been in Grand Haven there has been no lack of pressure or of water at any fire except that on one occasion while some repairs were being made to the pumps there was a delay of four minutes.

And this deponent further saith that George Van Patten, his predecessor as superintendent, left town before he arrived, and that he has never been able to find any record of fires during the time of said Van Patten's incumbency; and this deponent further says that during all the time he has been such superintendent all of
58 the public schools which chose to connect themselves with the mains of this company have been supplied with water free of charge; that the two principal public schools have been so supplied during the whole of his incumbency.

That this company has always been ready to furnish water for cleaning sewers and gutters and for all purposes required by the contract between the city and company and is now so ready and willing.

And further this deponent saith not.

A. M. COSGROVE.

Subscribed and sworn to before me this 1st day of November, 1887.

J. C. SHINKMAN,
*Notary Public, Kent Co., Mich.*

59 [Endorsed:] No. 918. U. S. circuit court for western dist. of Mich. In equity. Boston Safe Deposit and Trust Company, compl't, *vs.* City of Grand Haven *et al.*, def'ts. Affidavit of A. M. Cosgrove. Filed Nov. 1, 1887. C. L. Fitch, clerk. W. A. Underwood & Andrew Howell, compl't's sol'rs.

60 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Southern Division of the Western District of Michigan.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and GRAND HAVEN WATER WORKS, Defendants.

Now comes the said complainant, by W. A. Underwood and Andrew Howell, its solicitors, and moves the court for a temporary injunction pending decree in said cause against the defendants The

City of Grand Haven and Alvah L. Holmes, as prayed for in the bill on file in this cause, which said motion is founded on said bill and upon the affidavits of A. M. Cosgrove and Seth Moss, herewith filed.

Dated November 1st, A. D. 1887.

W. A. UNDERWOOD &
A. HOWELL,
*Sol'rs for Compl't.*

[Endorsed:] No. 918. U. S. circuit court, western dist. Mich. In equity. Boston Safe Deposit & Trust Company, compl't, *vs.* City of Grand Haven, Alvah L. Holmes, and Grand Haven W. W., def'ts. Motion for injunction. Filed Nov. 1, 1887. C. L. Fitch, clerk. W. A. Underwood & Andrew Howell, sol'rs for compl't.

61 *Chancery Subpœna.*

THE UNITED STATES OF AMERICA,
*Western District of Michigan, Southern Division,* } *ss*:

The President of the United States of America to The City of Grand Haven, a municipal corporation organized and incorporated under the laws of the State of Michigan; Alvah L. Holmes, and The Grand Haven Water Works, a corporation organized and existing under the laws of the State of Michigan, defendants, Greeting:

We command you and every of you that you appear before our judges of our circuit court of the United States of America for the western district of Michigan, at Grand Rapids, in said district, on the first Monday in the month of December next to answer the bill of complaint of The Boston Safe Deposit and Trust Company, a corporation organized under the laws of the State of Massachusetts, complainant, this day filed in the clerk's office of said court, in said city of Grand Rapids, then and there to receive and abide by such judgment and decree as shall then or thereafter be made, upon pain of judgment being pronounced against you by default.

To the marshal of the western district of Michigan to execute.

Witness the Hon. Morrison R. Waite, Chief Justice of the Supreme Court of the United States of America, at Grand, Rapids aforesaid, this first day of November, in the year of our Lord one thousand eight hundred and eight-seven.

[SEAL.]

CHARLES L. FITCH, *Clerk*,
By —— ——, *Deputy.*

MEMORANDUM.—The within-named defendants are notified that unless they enter their appearance in the clerk's office of said court, at Grand Rapids aforesaid, on or before the day to which the within writ is returnable the bill of complaint will be taken against them as confessed and a decree entered accordingly.

CHARLES L. FITCH, *Clerk*,
By —— ——, *Deputy.*

[Endorsed:] No. 918. Circuit court of the United States, western district of Michigan, southern division. The Boston Safe Deposit and Trust Company, complainant, *vs.* The City of Grand Haven, Alvah L. Holmes, and The Grand Haven Water Works, defendants. Chancery subpœna. Returnable to rule day first Monday in December, A. D. 1887. Filed November 7, A. D. 1887. Charles L. Fitch' clerk; W. A. Underwood and A. Howell, compl't's sol'rs.

To the marshal:

The marshal will serve this subpœna and notice for a writ of injunction personally upon each of the defendants, or in case any of them cannot be found, then serve on such by leaving a copy thereof at the dwelling-house or usual place of abode of such defendant with some adult person who is a member or resident of the family of suitable age and discretion.

——— ———,
*Compl't's Sol'r.*

WESTERN DISTRICT OF MICHIGAN, *ss:*

I hereby certify and return that on the 3d day of Nov., A. D. 1887, I served the within writ on the City of Grand Haven, Alvah L. Holmes, and Grand Haven Water Works, the defendants within named, at Grand Haven, in said district, by delivering copy of the writ to Wm. N. Angel, recorder of said city, and copy at residence of Mayor Thomas L. Kirby to an adult person, a member of the family, to wit, Henrietta Douke, he being absent in Chicago, to A. M. Cosgrove, superintendent of Grand Haven water works, and to Angie Holmes, wife of Alvah L. Holmes, at his residence, he being absent in East Tawas.

D. R. WATERS,
*U. S. Marshal,*
By ——— ———, *Deputy.*

62 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Compl't,
*vs.*
THE CITY OF GRAND HAVEN, ALVA L. HOLMES, and GRAND HAVEN WATER WORKS, Def'ts.

At chambers, at the city of Grand Rapids, Mich.

NOVEMBER 1ST, 1887.

Before Hon. Henry F. Severens, district judge.

In this cause, motion having been made for an injunction, as prayed for in the bill of complaint filed therein, and the said complainant having exhibited the said bill, together with the affidavits of A. M. Cosgrove and Seth Moss, in support of said motion, there-

upon it is ordered that the said defendant show cause why such motion should not be granted, on Monday, the 7th day of November, A. D. 1887, before said court, at the United States court-room, in the city of Grand Rapids, Michigan, at 10 o'clock in the forenoon, or as soon thereafter as counsel can be heard.

And it is further ordered that the said complainant cause a copy of this order, together with a copy of said bill and affidavits, to be served on the defendant, The City of Grand Haven, on or before Thursday, the 3d day of November, A. D. 1887, such service to be upon the mayor or recorder of the city of Grand Haven, and also within the same time serve upon each of the other defendants a copy of this order, with notice that a copy of said bill and affidavits have been served upon the city of Grand Haven, to which they are referred.

H. F. SEVERENS,
*Dist. Judge.*

63 October Term, A. D. 1887.

MONDAY, *November* 7, 1887.

The court met pursuant to adjournment.
Present: The Honorable Henry F. Severens, district judge.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants. } No. 918.

In this cause the motion heretofore made for a preliminary injunction came regularly on to be heard and was argued by W. A. Underwood and Andrew Howell, of counsel for said complainant, and Norris & Norris, of counsel for said defendant, The City of Grand Haven; and thereupon it is ordered by the court that said application be, and the same is hereby, denied.

64 UNITED STATES OF AMERICA:

In the Circuit Court of the United States for the Southern Division of the Western District of Michigan. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

In this cause now comes the above-named complainant, by W. A. Underwood, its solicitor and of counsel, and moves the court for leave to amend the bill of complaint filed in this cause by filing in this cause the proposed amendments to said bill hereto annexed, which motion is founded upon the said bill of complaint now on file in this court and upon the affidavit of said W. A. Underwood, made on the 15th day of November, 1887, also on files in this cause,

and upon the affidavit of George C. Barnum, showing service of a copy of the said amendments on Messrs. Norris & Norris, sol'rs for the def't.

Dated Nov. 16, 1887.

W. A. UNDERWOOD,
*Sol'r for Compl't.*

UNITED STATES OF AMERICA:

Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

STATE OF MICHIGAN, *County of Wayne,* } *ss:*

George C. Barnum, of the city of Detroit, in said county, being duly sworn, deposes and says that he is a clerk in the office
65 of W. A. Underwood, one of the solicitors for said complainant; that on Tuesday, the 15th day of November, 1887, before the hour of six o'clock in the afternoon of said day, he deposited in the post office in the city of Detroit, Michigan, a copy of the proposed amendments, to which this affidavit is attached, sealed in an envelope and addressed "Messrs. Norris & Norris, counsellors-at-law, Grand Rapids, Mich.," and that the postage on said amendments was duly prepaid by stamps affixed thereon.

GEORGE C. BARNUM.

Subscribed and sworn to before me this 15th day of November, A. D. 1887.

HENRY A. MANDELL,
*Notary Public, Wayne County, Michigan.*

UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. Holmes, and The Grand Haven Water Works, Defendants.

Amendments to the Bill of Complaint in this Cause.

1st. Amend said bill by adding at the end of the third paragraph thereof the following, viz:

"And which said resolution your orator charges has never been rescinded, revoked, or annulled by said common council."

2nd. Amend said bill by inserting after the words "the said common council," in the second line of the fifth paragraph, the following: "Determined to discontinue the use of said city water works as a means of supplying said city with water, and to abandon that means of furnishing and supplying water in the city;" and

3rd. Amend paragraph five of said bill by inserting after the words "in the manner aforesaid," in the last printed line of said paragraph, the following, viz:

66 "And for that purpose made, executed, and filed a certificate or articles of association as required by said statute, in which certificate the object for which said corporation was formed was stated to be to supply the city of Grand Haven and the inhabitants thereof with water for any and all purposes, and to contract for, use, and own such lands, buildings, machinery and apparatus, mains, pipe lines, reservoirs, appurtenances, rights, and privileges as may be necessary and convenient for the accomplishing such object and purpose."

4th. Amend said bill by inserting after the words "said city," in the second line of the fifteenth paragraph, the following:

"By means of the acts and determinations of its said common council hereinbefore set forth;" and

5th. Amend said bill by adding at the end of the twentieth paragraph thereof the following, viz:

"And that said city, by means of said resolution of the 12th of April, 1883, and by means of the said acts and proceedings of said common council hereinbefore set forth, and by force of the said statute under which said water works company was organized as aforesaid, has elected to secure and obtain its water supply for itself and for the inhabitants of said city under and in accordance with the provisions of said last-named statute, and that said city has not now any power or authority by law to construct water works or to supply itself and inhabitants with water except under the provisions of said statute."

6th. Amend said bill by adding at the end of the twenty-second paragraph thereof the following, viz:

"And your orator further states upon its information and belief and charges that if said city shall construct water works in said city as it proposes and threatens to do, and as it is now doing, and

67 shall supply water therefrom for itself and for the use of its inhabitants, or any considerable number of them, as it now proposes and offers to do as aforesaid, and as it intends to do, that it will thereby injure and depreciate and almost, if not entirely, destroy the value of the water works of said water works company; that it will depreciate their value to the extent at least of $35,000 and upwards, and that it will also thereby and by means of its holdings out and threats and declarations of its intentions to construct water works and supply the city and its inhabitants with water therefrom injure and depreciate the mortgage security and the value of said bonds secured thereby to a like extent and will to a like extent injure and depreciate the market value of said bonds—that is, to the extent of $35,000 and upwards—and that on account of the reports which have been sent out that said city was about to enter

into competition with said company in the furnishing of water in said city the salability and market value of said bonds has now been injured and depreciated, and should said city enter into such competition and build works of its own and such threatened competion become a fixed fact such injury and depreciation last mentioned will be greatly increased and said bonds will be rendered almost, if not quite totally, unsalable and their value almost totally destroyed."

BOSTON SAFE DEPOSIT AND
TRUST CO.
W. A. UNDERWOOD,
*Solicitor for Complainant.*

UNITED STATES OF AMERICA,
*Eastern District of Michigan,*
*State of Michigan, County of Wayne,* } ss:

On this 15th day of November, A. D. 1887, before me, a
68 notary public in and for said county, personally came William A. Underwood, of the city of Detroit, in said county of Wayne, known to me to be the person who, as s-licitor for the Boston Safe Deposit and Trust Company, signed the foregoing amendments for said company and made oath that he is an attorney and counsellor at law and a solicitor and counsellor in chancery, d_ly admitted to the Supreme Court of the United States, and that he is solicitor for the said complainant, "Boston Safe Deposit and Trust Company," and has charge for said "Boston Safe Deposit and Trust Company" of the controversy of said complainant with the city of Grand Haven set forth in the bill of complaint in this cause, and that he is authorized to sign the foregoing amendments to the bill of complaint in the cause named in the entitling of said amendments for the said "Boston Safe Deposit and Trust Company" and to make oath to the same, and that he has read the foregoing amendments to said bill of complaint, subscribed by him as such solicitor, and knows the contents thereof, and that the same, so far as the allegations therein are upon knowledge, are true, and so far as the same are stated upon information and belief he believes them to be true, and that he makes oath to said amendments for the reason that neither the complainant -or any of its officers reside in or are within the State of Michigan, and that he is as well acquainted with the matters set forth in said amendments as are any of the officers or members of the complainant company.

W. L. CARPENTER,
*Notary Public, Wayne Co., Mich.*

[Endorsed:] No. 918. Circuit court of the United States for southern div. of W. dist. of Mich. In equity. Boston Safe Deposit and Trust Co., complainant, *vs.* City of Grand Haven *et al.*, def'ts. Amendments to bill and motion for allowing, etc. Filed Nov. 16, 1887. C. L. Fitch, clerk. W. A. Underwood, compl't's sol'r.

69 UNITED STATES OF AMERICA:

In the Circuit Court of the United States for the Southern Division of the Western District of Michigan. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

At a session of said court held at the city of Grand Rapids on the — day of November, 1887.

Present: Hon. —— ——, district judge.

In this cause, the complainant having moved the court for leave to amend the bill of complaint filed in this cause to the effect and in the manner set forth in said motion, and upon consideration of the matter, it appearing to the court that such proposed amendments are proper to be made—

Ordered that complainant have leave to amend said bill in the manner and to the effect set forth in said motion by filing said amendments in this cause.

70 October Term, A. D. 1887.

WEDNESDAY, *November* 16, 1887.

The court met pursuant to adjournment.

Present: The Honorable Henry F. Severens, district judge.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.
No. 918.

In this cause, the complainant having moved the court for leave to amend the bill of complaint filed in this cause to the effect and in the manner set forth in said motion, and, upon consideration of the matters, it appearing to the court that said proposed amendments are proper to be made, ordered that complainant have leave to amend said bill in the manner and to the effect set forth in said motion by filing said amendments in this cause.

71 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVA L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

In this cause, upon motion of Norris & Norris, solicitors for the defendant The City of Grand Haven, it is ordered that the appear-

ance of the said defendant, The City of Grand Haven, be, and the same hereby is, entered in this cause.

Dec. 5, '87.

NORRIS & NORRIS,
*Sol'rs for Defendant The City of Grand Haven.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. The Boston Safe Deposit and Trust Co. *v.* The City of Grand Haven *et al.* Appearance of the city of Grand Haven. Filed Dec. 5, 1887. C. L. Fitch, clerk. Norris & Norris, for city of G. H.

72 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division, October Term, A. D. 1887.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES and The Grand Haven Water Works, Defendants.
} Entered Dec. 5, 1887.

In this cause, upon motion of Norris & Norris, solicitors for the defendant The City of Grand Haven, it is ordered that the appearance of the said defendant, The City of Grand Haven, be, and the same hereby is, entered in this cause.

NORRIS & NORRIS,
*Sol'rs for Defendant The City of Grand Haven.*

73 The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVA L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

Now comes the said defendant, The City of Grand Haven, by Norris & Norris, its solicitors, and moves the court for an order that the said complainant, The Boston Safe Deposit and Trust Company, be required to file security for all costs which may be taxed against it in this cause. This motion is based on the files, records, and proceedings herein.

NORRIS & NORRIS,
*Sol'rs for Def't The City of Grand Haven.*

Mr. W. A. Underwood and Mr. Andrew Howell, solicitors for the complainant:

You will please take notice that the foregoing is a motion entered in this cause, and that the same will be brought on for argument

before said court on Tuesday, the 27 day of December, A. D. 1887, at the opening of court on that day, or as soon thereafter as counsel can be heard.

NORRIS & NORRIS,
*Sol'rs for The City of Grand Haven.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. The Boston Safe Deposit and Trust Co. *vs.* The City of Grand Haven. Motion for security for costs. Filed Dec. 5, 1887. C. L. Fitch, clerk. Norris & Norris, sol'rs for city of Grand Haven.

74 The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and The Grand Haven Water Works, Defendants.
} Entered Dec. 5, 1887.

Now comes the said defendant, The City of Grand Haven, by Norris & Norris, its solicitors, and moves the court for an order that the said complainant, The Boston Safe Deposit and Trust Company, be required to file security for all costs which may be taxed against it in this cause.

This motion is based upon the files, records, and proceedings herein.

NORRIS & NORRIS,
*Sol'rs for Def't The City of Grand Haven.*

75 UNITED STATES OF AMERICA:

In the Circuit Court of the United Stated for the Southern Division of the Western District of Michigan. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

Know all men by these presents that I, Joseph C. Hart, of the city of Detroit, Michigan, do hereby acknowledge myself as security for all costs which the said defendants may recover from the said complainant in the said cause in said court.

In witness whereof I have hereunto set my hand and seal, at the city of Detroit, Wayne county, Michigan, this 26th day of December, A. D. 1887.

JOSEPH C. HART. [L. S.]

STATE OF MICHIGAN, } ss:
*County of Wayne,* }

Joseph C. Hart, of the city of Detroit, in said county, being duly sworn, deposes and says that he is fairly worth the sum of at least ten thousand dollars liable to execution over and above all his debts and liabilities.

And further saith not.

JOSEPH C. HART.

Subscribed and sworn to before me this twenty-seventh day of December, A. D. 1887.

[NOTARIAL SEAL.]

W. L. CARPENTER,
*Notary Public, Wayne Co., Mich.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Company *vs.* The City of Grand Haven *et al.* Security for costs. Filed Dec. 28, 1887. C. L. Fitch, clerk.

76 WESTERN DISTRICT OF MICHIGAN, } ss:
*Kent County,* }

Mark Norris, being duly sworn, deposes and says that on the 5th day of December, A. D. 1887, he served a true copy of the foregoing motion for security for costs on W. A. Underwood, one of the solicitors for the complainant, by depositing the same, sealed in an envelope addressed "W. A. Underwood, Detroit, Mich.," with full postage prepaid, in the post office at Grand Rapids, Michigan, and that Detroit is the residence and place of business of said W. A. Underwood.

MARK NORRIS.

Subscribed and sworn to before me this 28 day of December, A. D. 1887.

NETTIE B. NIXON,
*Notary Public, Kent County, Mich.*

The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan. Southern Division.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVA L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

Now comes the said defendant, The City of Grand Haven, by Norris & Norris, its solicitors, and moves the court for an order that the said complainant, The Boston Safe Deposit and Trust Company, be required to file security for all costs which may be taxed against it in this cause. This motion is based on the files, records, and proceedings herein.

NORRIS & NORRIS,
*Sol'rs for Defendant The City of Grand Haven.*

Mr. W. A. Underwood and Mr. Andrew Howell solicitors for the complainant:

You will please take notice that the foregoing is a motion entered in this cause, and that the same will be brought on for argument before said court on Tuesday, the 27 day of December, A. D. 1887, at the opening of court on that day, or as soon thereafter as counsel can be heard.

NORRIS & NORRIS,
*Sol'rs for Defendant The City of Grand Haven.*

[Endorsed:] No. 918. U. S. circuit court, W. D., S. D. Mich. In equity. The B. S. D. & Trust Co. *vs.* The City of Grand Haven *et al.* Motion for security for costs. Filed Jan. 3, 1883. C. L. Fitch, clerk. Norris & Norris for def't The City of Grand Haven.

77 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division. In Equity.

The several answer of the defendant "The City of Grand Haven" to the bill of complaint of the Boston Safe Deposit and Trust Company exhibited against this defendant, the Grand Haven water works, and Alva L. Holmes.

This defendant, now and hereafter at all times reserving to itself all benefit and advantage of exception which can or may be had or taken to the many errors, uncertainties, and insufficiencies in the said complainant's bill of complaint contained, for answer thereto or unto so much and such parts thereof as this defendant is advised are material for it to make answer unto, answering, says:

First. To the 1st paragraph of the bill: That it admits the matters of fact stated and charged in the first paragraph of complainant's bill.

Second. To the 2nd paragraph of the bill: It admits that on the 12th day of April, 1883, it did not have any adequate or proper supply or means of supplying water for its use or for its streets and public buildings or for the extinguishment of fires or for the protection of the city or the property or inhabitants thereof from loss and injury by fire or for the use of the inhabitants thereof for domestic and other necessary uses and purposes, and defendant neither admits nor denies any of the other matters of fact stated and charged in the second paragraph of complainant's said bill, but leaves complainant to make proof thereof if material.

Third. To the 3d paragraph of the bill: Defendant admits
78 that on the 12th day of April, 1883, its common council passed the resolution stated and set forth in Schedule A, annexed to the said complainant's bill, and that said resolution has never been rescinded or revoked by the said common council by any formal resolution entered upon the records thereof, but this defendant avers that by the subsequent action of the said common council in determining to extend its existing system of water works

for this defendant and in contracting for the extension and enlargement of its said water works this defendant, through its said common council, has in effect rescinded and annulled the said resolution.

Fourth. To the 4th paragraph of the bill: And this defendant admits that, on or about the 25th day of September, A. D. 1883, the S. L. Wylie Construction Company submitted to the common council of the city of Grand Haven certain propositions, in substance the same as those annexed to Schedule B, complainant's bill.

Fifth. To the 5th paragraph of the bill: Defendant denies that its said common council ever at any time determined to discontinue the use of its water works as a means of supplying said city with water and to abandon that means of furnishing and supplying water to defendant, and defendant admits that, on or about the 25th day of September, 1883, its common council did resolve to receive the proposition made by the said S. L. Wylie Construction Company and did appoint a committee to arrange the details of a contract in general conformity with the proposition presented.

Sixth. To the 6th paragraph of the bill: Defendant admits that after the making of the said proposition by the S. L. Wylie Construction Company and the action thereon by this defendant's common council, as hereinbefore set forth, one Solon L. Wylie, James
79 A. Norton, Edward C. Cook, Charles T. Wylie, and Willis C. Harris took proceedings to organize a corporation known as the Grand Haven water works, which said corporation by its articles of association claims to have a capital stock of sixty thousand dollars, divided into shares of $50 each, which shares were subscribed for by the following parties, to wit:

S. L. Wylie, 1,000 shares.
J. A. Horton, 50 shares.
E. C. Cook, 50 shares.
C. T. Wylie, 50 shares.
W. C. Harris, 50 shares.

That the articles of incorporation of said Grand Haven water works were signed on the 13th day of October, 1883; that thereafter the said Grand Haven water works assumed to be a corporation organized under the laws of Michigan and made and entered into contracts under that name.

Seventh. To the 7th paragraph of the bill: And this defendant admits that, on the 8th day of November, 1883, this defendant's common council caused its mayor and recorder to execute a contract in writing with the said Grand Haven water works, which said contract is set forth in Schedule B, annexed to the complainant's bill; and defendant avers that it is a public municipal corporation organized and existing under a public act of the legislature of the State of Michigan, having certain limited powers as such corporation, and that said complainant and the Grand Haven water works and all other persons dealing with the said city or the said complainant or the said Grand Haven water works and purchasers of the said Grand Haven water works mortgage bonds had notice of

and are bound by the provisions of this defendant's charter;
80 and this defendant further avers that the said contract, Schedule B of the complainant's bill, was made and entered into by its said common council without any right, authority, or power in the said common council or in this defendant to enter into, make, or execute the said contract; that the said contract was made and entered into without any legal authority on the part of this defendant and is wholly illegal and void.

Eighth. To the 8th paragraph of the bill: This defendant denies all and singular the matters of fact stated and charged in the 8th paragraph of complainant's bill, and this defendant avers that the said Grand Haven water works wholly failed to perform the said contract, Schedule B, in complainant's bill, and that because of such non-performance of said contract on the part of said Grand Haven water works this defendant, by and through the resolution of its common council entered on the records thereof, on, to wit, September 4, 1884, declared the said contract cancelled and forfeited.

Ninth. To the 9th, 10th, 11th, and 12th paragraphs of the bill: And this defendant says that it is a stranger to all and singular the matters of fact stated, set forth, and charged in the 9th, 10th, 11th, and 12th paragraphs of complainant's said bill and is not informed as to any of said matters except by complainant's bill, and therefore it neither admits nor denies the same, but leaves complainant to make proof thereof.

Tenth. To the 13th, 14th, 15th, 16th, and 17th paragraphs of the bill: This defendant denies all and singular the matters of fact set forth and charged in the 13th, 14th, 15th, 16th, and 17th paragraphs of the complainant's said bill.

Eleventh. To the 18th paragraph of the bill: This defendant admits that it has lately, by and through its said common council, determined to extend and enlarge for itself its system of
81 water works to supply itself and its inhabitants with water for the extinguishment of fires and for domestic and other uses and purposes; that it is now proceeding to carry out such purpose and is extending and enlarging such water works; that it has made an agreement with the defendant, Alva L. Holmes, and has employed said Holmes to lay water pipe in its streets and to proceed with the extension and enlargement of such water works, and that in pursuance of such agreement the said Holmes has commenced to lay water mains and pipes in said streets, and that at the time of the filing of complainant's bill was engaged in laying water pipes in the public streets of the city of Grand Haven and in streets in which the Grand Haven water works has water pipes laid, and defendant admits that it intends to extend its said pipes and mains to such an extent as its common council shall deem necessary and proper in order to furnish water for its own uses and for the uses of its inhabitants, but this defendant denies that it is causing offers to be made to persuade and induce those who are receiving their water supply from the Grand Haven water works to abandon said company and take their water supply from the said city water works; and this defendant admits that it has fixed upon and published a scale of

rates at which it will furnish water to its citizens, but it denies that such rates are greatly below the average rates charged by water works companies throughout the State furnishing water under like circumstances and conditions, and it denies that its said rates are greatly below the cost of furnishing the said water. Defendant admits that its said rates are below the rates of the Grand Haven water works, and it avers that the rates of said Grand Haven water works, quantity and quality of supply considered, are grossly excessive.

A. Eleventh. To the 19th paragraph of said bill: This de-
82 fendant admits that it intends to and will extend and enlarge water works and lay water pipes in its streets for the purposes hereinbefore set forth and that it will supply water therefrom, but it denies that its so doing will be to the great and irreparable injury and depreciation of the mortgage bonds of the Grand Haven water works and consequent loss and damage to the holders of said bonds, and it avers that it has full right, power, and authority to extend and enlarge its said water works, lay said pipe, and furnish water therefrom, and that if the said Grand Haven water works and said bondholders incur any loss by so doing that said loss is wholly *damnum absque injuria.*

Twelfth. To the 20th, 21st, 22nd, 23rd, and 24th paragraphs of bill: Defendant denies all and singular the matters of fact stated and set forth in the 20th, 21st, 22nd, 23rd, and 24th paragraphs of complainant's bill.

Thirteenth. Defendant's statement of all its action. Defendant, further answering, says that all its dealings, contracts, and agreements with the S. L. Wylie Construction Company and the Grand Haven water works are contained in the records and proceedings of its common council; which records and proceedings are in the words and figures following, to wit:

"Sept. 25th, 1883.

The mayor stated that he had convened the council to consider certain propositions of the S. L. Wylie Construction Company of Massachusetts to erect water works in the city of Grand Haven. On motion of Alderman Tate, it was resolved that the propositions made by Mr. Wylie for the Grand Haven Water Works Company be received and that a committee of three, including the city attorney,
be appointed to arrange, in conjunction with the Grand
83 Haven Water Works Company, the details for a contract in general terms in conformity with the proposition presented. The mayor appointed as such committee Ald. Tate and Boyden. On motion of Ald. Tate, the committee was authorized, in case of the absence of the city attorney, to engage the services of some other attorney, if they deem it necessary.

Sept. 26th, 1883.

Ald. Tate, as chairman of the special committee on contract with the water works committee, reported progress and asked for further time wherein to make a report, which was granted.

Oct. 25th, 1883.

Alderman Boyden, from the special committee on water works contract, presented a contract between the Grand Haven water works and the city of Grand Haven. On motion of Alderman Hubbard, the contract was referred to a special committe of three, including the mayor, with instructions to report at the next meeting of the council. The mayor appointed on such committee Ald. Hubbard and Boyden.

Oct. 26th, 1883.

Ald. Hubbard, from the special committee on water works contract, reported that the committee had suggested several changes which the company had concurred in, and presented the contract as amended. The roll being called, the contract was then approved by the following vote: Ayes—Ald. Barnes, Blocker, Boyden, Brower, Gleason, Hubbard, and Sanford. Nays—none.

Ald. Boyden presented the following resolution:

Resolved, That the mayor and recorder be authorized and instructed to sign the contract prepared by the city attorney between the Grand Haven water works and the city of Grand Haven in regard to water works and the selling of the present water works and leasing the ground upon which the present pumping-house stands.

Carried by the following vote:

Ayes—Ald. Barnes, Blocker, Boyden, Brower, Gleason, Hubbard, and Sanford. Nays—none.

84 November 8th, 1883.

The mayor stated that the contract between the city and the Grand Haven water works had been executed.

December 6th, 1883.

Alderman Sanford presented a communication from the Grand Haven water works asking to have certain changes made in their contract, and, on motion, the matter was referred to the city attorney for his opinion.

December 6th, 1883.

The city attorney reported that two of the proposed changes to the water works contract were quite unimportant, but that one of them ought to be well considered. On motion of Ald. Gleason, the proposed alterations to the water works contract were referred to a special committee consisting of the mayor, Ald. Hubbard, and the city att'y.

Feb'y 7th, 1884.

On motion of Ald. Hubbard, the subject of placing and locating hydrants was referred to the committee on fire department, with instructions to report at the next meeting of this council.

March 20th, 1884.

On motion of Ald. Hubbard, the mayor was requested to notify the water works that the city is ready to execute the contract of sale of the pumping house and machinery and desires the water works to take charge of the same.

May 15th, 1884.

On motion of Ald. Emlaw, the water works were permitted to use the fire engine to pump out the ditch on Monroe street for the purpose of laying water pipe, provided it *occurs* no expense to the city.

June 19th, 1884.

A petition of the Grand Haven water works asking for an extension of time of two months from July 1st, 1884, wherein to complete the works was read, and, on motion of Ald. Safford, the prayer of the petition was granted. Mr. S. L. Wylie addressed the
85 council, stating that the water works will pay whatever deficiency there may be in the running expenses of the present water works after deducting the water rents; also that when the new water works are completed they will take the old water works according to agreement and pay for them.

September 4th, 1884.

The mayor stated the time fixed in the contract and extended by the council for the completion of the water works had expired.

Sept. 4th, 1884.

Ald. Barnes presented the following:

Whereas the Grand Haven water works in putting in water works in the city of Grand Haven has failed to complete said works in the time agreed upon in their contract with said city; and whereas there have been certain other violations of said contract on the part of said company:

Therefore be it resolved, That said contract be, and the same hereby is, cancelled and declared forfeited.

The roll being called, the foregoing preamble and resolution were adopted by the following vote: Ayes—Ald. Barnes, Brower, Emlaw, Gleason, Kerr, and Safford. Nays—none. Absent—Ald. Blocker and Sanford.

Sept. 25th, 1884.

The city attorney recommended that a copy of the resolution of this council of Sept. 4th inst., declaring the contract with the Grand Haven water works forfeited, be served on the water works company.

Sept. 27th, 1884.

The recorder stated that he had served a copy of the resolution declaring the water works contract forfeited on Mr. Cook, agent of

the water works. Mr. S. L. Wylie addressed the council on the subject-matter of the water works and stated, among other things, that the water works would fulfill its contract and promises in every respect, not alone to the letter but also to the spirit of said contract.

86 October 2nd, 1884.

The mayor stated that in a late consultation with Mr. S. L. Wylie he had stated that the company would carry out all their promises and agreements to and with the council; that they would take the old water works and pay for them, and that they would pay the difference between the receipts and the running expenses of the water works, and also recommended that a committee be designated to inquire into and report the running expense of the water works as well as the receipts.

On motion of Ald. Gleason, the committee on accounts, with the recorder added thereto, was instructed to investigate and report the excess of the expenses over the receipts of the water works since the date when the water works company should have taken charge of the works according to the contract.

October 16th, 1884.

Ald. Blocker, from the special committee on water rates and water works, asked for further time wherein to report, which was granted.

November 6th, 1884.

The recorder presented a communication from the Grand Haven water works, signed by T. A. Taylor, secretary, giving notice that the water works are completed; that they will charge the city rent for the hydrants from date, and asking to have a day appointed for the test of the same.

On motion of Ald Sanford, the communication was referred to the order of motions and resolutions.

On motion of Ald. Sanford, the communication from the water works was received and ordered to be placed on file, and the city attorney instructed to make a proper reply thereto on behalf of the city, reserving all the rights the city may have in the premises.

November 28th, 1884.

Mr. George W. McBride addressed the council in behalf of the water works company, requesting that if any cause of dissatisfaction on the part of the council exists the same be stated and ex-
87 plained, so that the same, if possible, may be removed and an amicable understanding be arrived at. The mayor stated that the cause of dissatisfaction is that the company has not lived up to the conditions of the contract, whereupon Mr. McBride suggested that some time be appointed for a conference between the council and the water works, at the same time stating that he is not the authorized agent of the water works.

December 31st, 1884.

The recorder presented the following communication:

GREENFIELD, MASS., *December 26th*, 1884.

To the mayor and common council of Grand Haven, Michigan:

GENTLEMEN: During the negotiations of the contract for the construction of the Grand Haven water works, this company agreed verbally to purchase of the city the building and plant used by it for water works purposes, when said proposed water works should be completed and ready for use. This company now has an opportunity to dispose of a part of said plant, if it can have the same within three weeks, and this company respectfully informs the council, if it will, within that time, viz., three weeks, take such action as will enable this company to at once acquire title and possession of said building and plant, it will take the same and pay for it according to the terms of said agreement; but if not, if the council shall fail to take such action within said time, this council is respectfully informed that this company will not take said plant or building, or in any manner consider itself bound by said agreement.

THE S. L. WILEY CONSTRUCTION COMPANY,
By S. L. WILEY, *Pres't.*

On motion of Ald. Barnes, the communication was referred to the committee of fire department, together with the city attorney,
88 to confer with the water works Co. and report.

A bill of the Grand Haven water works for two months' supply of water to January 1st, 1885, $7,000, was, on motion of Alderman Barnes, laid on the table by the following vote: Ayes—Ald. Barnes, Brower, Emlaw, and Kerr. Nayes—none. Absent—Ald. Blocker, Safford, and Sanford.

January 15th, 1885.

Ald. Emlaw stated that a test of the new water works had been had this afternoon, and that the works had not been found satisfactory. The Grand Haven water works presented the following:

To the common council of the city of Grand Haven, Michigan.

GENTLEMEN: The Grand Haven water works would respectfully ask your honorable body to declare by some corporate action if the works of said company are in any way unsatisfactory to the council; and, if so, to state the respects in which the same are so unsatisfactory.

Respectfully,

THE GRAND HAVEN WATER WORKS,
By GEORGE VAN PATTEN, *Sup't.*

Also:

To the common council of Grand Haven.

GENTLEMEN: In view of the test of the works of the Grand Haven water works this day held, this company respectfully asks this council

for some action on the subject of the relations between this company and the city.

Dated January 15th, 1885.

THE GRAND HAVEN WATER WORKS,
By GEORGE VAN PATTEN, *Sup't.*

On motion of Ald. Brower the communications were referred to the committee on fire department, togetger with the city att'y, to report at an adjourned meeting to be held on Saturday night next.

January 17th, 1885.

Alderman Safford, from the committee on fire department, presented the following reports:

89 To the common council of the city of Grand Haven.

GENTLEMEN: Your committee to whom was referred the appended communications from the Grand Haven water works, would respectfully submit the following report:

That in their judgment the recent test of the water works demonstrated their inability to do and perform the conditions and several tests as embraced in the propositions submitted to the common council by the S. L. Wiley Construction Company Sept. 25th, 1883, of which the following are more particularly mentioned, viz:

1st. That the water supply is insufficient for the purposes in said proposition mentioned, in that the supply of good and sufficient water for fire, mechanical, manufacturing, and domestic purposes, and not deleterious to the health of those using it, became exhausted within twenty minutes from the time the test began, whereby it became necessary to and connection was made with the river; wherefore the water then used was foul, dirty, impure, and entirely unfit for the purpose for which it was proposed that it might be used.

2nd. That the supply of water by the test was conclusively shown not to be ample for all the purposes contemplated in said proposition.

3rd. That the test demonstrated that the wells established are not of sufficient capacity for the purpose specified and contemplated in said proposition.

4th. That the system of pumping engines was demonstrated by the test not to be capable and durable and properly adjusted and located as in said proposition provided and contemplated.

5th. That the test conclusively demonstrated that the pressure power of the pumping engines was not sufficient and equivalent to throw six one-inch streams of water to a perpendicular height of one hundred feet simultaneously.

90 6th. That said water works were in all essential respects inadequate to the wants and necessities of the people and city of Grand Haven as provided in said proposition and for the purposes for which they were contemplated.

MAJOR B. D. SAFFORD,
J. W. KERR, *Committee.*

On motion of Ald. Sanford the report was adopted and ordered to be placed on file by the following vote: Ayes—Ald. Barnes, Blocker, Brower, Kerr, Safford, and Sanford. Nays—none. Absent—Ald. Emlaw. The water works presented a communication asking for a further test of the water works, and suggesting next Monday, January 19th, at ten o'clock in the forenoon, as the time for such test. On motion of Ald. Sanford the communication was referred to a special committee, consisting of Ald. Safford, Blocker, and the city attorney, to report to the president if they deem it necessary to have a call of the council. The water works presented a request that Alderman Blocker be required to make a report of the performance of the engines at water works and the pressure power during the test.

On motion of Ald. Brower the matter was referred to the special committee.

January 29th, 1885.

Ald. Safford, of the special committee to whom was referred the communication from the water works asking for a further test, submitted a report deeming it inexpedient to call for a test at present, on account of the severity of the weather. On motion the report was received and ordered to be placed on file.

On motion of Ald. Blocker the chief engineer was instructed not to use the water from the Grand Haven water works.

January 31st, 1885.

Mr. George Van Patten, sup't of the water works, presented a bill for hydrants rental to January 1st, 1885, $629, and asked
91 leave to withdraw the former bill. On motion of Ald. Barnes leave was granted to withdraw the former bill.

February 5th, 1885.

On motion of Ald. Barnes a bill of the water works, $629, for hydrant rent to January 1st, 1885, was laid on the table.

April 16th, 1885.

Ald. Safford offered the following resolution:

Resolved, That the chief of the fire department be, and hereby is, instructad not to use or permit to be used any of the hydrants of the Grand Haven water works or to use or employ their water works in case of a fire in the city of Grand Haven. Which resolution was adopted by an unanimous vote of the aldermen.

July 30th, 1885.

The bill of the Grand Haven W. W. for the use of their hydrants was presented, and on motion of Ald. Golmyer was laid on the table.

June 17th, 1886.

By Ald. Safford:

Resolved, That we cannot accept the proposition presented with the letter from Mr. Wiley of the 12th inst. Adopted unanimously.

July 22nd, 1886.

On motion the communications of S. L. Wiley was laid over until the next meeting of this council.

August 5th, 1886.

On motion of Ald. Bell the proposition of S. L. Wiley presented at the previous meeting of this council was laid on the table."

Fourteenth. Defendant's further affirmative defense: Defendant avers that the said Grand Haven water works has wholly failed to fulfill its said contract, Schedule B to the complainant's bill, in all respects and particularly the following:

1st. That said Grand Haven water works did not have its system of water works constructed and in full and complete running
92 order before the 1st of July, 1884, and before the first day of September, 1884.

2nd. That said Grand Haven water works did not locate and establish a good and sufficient water supply for fire, mechanical, manufacturing, and domestic purposes, not deleterious to the health of those using it, but that the said water supply of the Grand Haven water works is wholly insufficient for the purposes aforesaid and is totally unfit for the use of human beings.

3rd. That said water supply is not ample for all purposes contemplated by said contract and is not taken from such point or place as best subserves the joint interest of the city of Grand Haven and the said Grand Haven Water Works Company.

4th. That said Grand Haven water works did not and has not established wells of sufficient capacity nor infiltration galleries or filters to supply the wants of this defendant and its inhabitants.

5th. That said Grand Haven water works has not furnished and set a system of pumping engines modern, capable, and durable and sufficiently massive and duplicate, with the combined capacity of 1½ million gallons of water every 24 hours.

6th. That the pressure power of the pumping engines of said water works *are* not and never *have* been sufficient and equivalent to throw six one-inch streams of water to a perpendicular height of 100 feet simultaneously from hydrants situated upon its lines of pipe.

7th. That said Grand Haven water works has not built and established a pumping station and erected thereon a fine, commodious, and ornamental building, comparatively fire proof, entirely of brick or stone, with slate or metal roof, of such character as to be a credit to the city; that said Grand Haven Water Works Company's piping system is not consistent with the laws regulating hydraulic pressure

and delivery and is not and never has been satisfactory to this defendant's common council.

93 8th. That the said Grand Haven water works has never, at any time, laid down six miles of mains and water pipe in said city of Grand Haven.

9th. That said Grand Haven water works mains and water pipes are not and never have been of standard weight and quality of iron; that its cast-iron pipe will not bear hydraulic test of 300 pounds to the square inch, and that its wrought-iron pipe will not bear an hydraulic test of 500 pounds to the square inch.

10th. That said Grand Haven water works boilers at the pumping station are not of eighty-horse-power capacity or of sufficient capacity to drive its pumping engines with surety and safety.

11th. That said Grand Haven water works does not and never has maintained on its said works a fire pressure at all times almost instantaneous or effective within five minutes after a fire alarm is communicated to the pumping station.

12th. That the rates for water charged by said Grand Haven water works to private consumers for mechanical purposes and to manufacturers are not fair and equitable and are largely in excess of the rates charged in any city of like population and under like conditions. Fifteenth. Defendant's further affirmative defence: And defendant further says that it has never at any time accepted or used the water furnished by said Grand Haven water works, and that all use, if any, of said water by the fire department of the city of Grand Haven for the extinguishment of fires has been contrary to the express order and direction of this defendant's common council; that is has never in any way, shape, or manner acknowledged or admitted that the said Grand Haven water works had complied with its contract, but has at all times and under all circumstances claimed and insisted and now claims and insists

94 that the said contract is void, and that this defendant is not and never has been in any way bound thereby.

Sixteenth. Defendant's demurrer clause, no equity: And defendant charges that the said complainant has not in and by its said bill made or stated such a case as doth or ought to entitle the said complainant to any relief against this defendant; that the complainant has an adequate remedy at law, and defendant prays the same benefit and advantage as if it had demurred to said bill for want of equity, and it prays to be hence dismissed with its reasonable costs in this behalf most wrongfully sustained.

[Seal of City.]

F. W. KIRBY,
*Mayor of "the City of Grand Haven."*
WM. N. ANGEL,
*Recorder of the City of Grand Haven.*

The foregoing answer of the defendant "The City of Grand Haven," a corporation aggregate and municipal, was taken this 28th day of December, A. D. 1887, before me, the undersigned,

under the common seal of said corporation, as by their seal affixed appears.

Attest:

JOHN VANPELL,
*Notary Public in and for the County of Ottawa, State of Michigan.*

NORRIS & NORRIS,
*Def't's Solicitors.*
V. W. SEELEY,
*City Att'y, of Counsel for Def't.*

[Endorsed:] No. 918. U. S. circuit court, 6th circuit & western dist. of Michigan. In equity. Boston Safe Deposit & Trust Co. *vs.* City of Grand Haven *et al.* Answer. Filed Jan. 3, 1888. C. L. Fitch, clerk. Norris & Norris, sol'rs for def't.

95 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Western District of Michigan, Southern Division. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

*The Replication of Boston Safe Deposit and Trust Company, Complainant, to the Answer of The City of Grand Haven, Defendant.*

This repliant, saving and reserving to itself all and all manner of advantage of exception to the manifold insufficiencies of the said answer, for replication thereunto saith that it will aver and prove its said bill to be true, certain, and sufficient in the law to be answered unto, and that the said answer of the said defendant is uncertain, untrue, and insufficient to be replied unto by this repliant; without this, that any other matter or thing whatsoever in the said answer contained material or effectual in the law to be replied unto, confessed and avoided, traversed or denied, is true; all which matters and things this repliant is and will be ready to aver and prove as this honorable court shall direct, and humbly prays as in and by its said bill it hath already prayed.

Dated Feb. 6, 1888.

W. A. UNDERWOOD &
ANDREW HOWELL,
*Sol'rs for Compl't.*

[Endorsed:] No. 918. U. S. circuit court, western dist., sou. div. of Mich. In equity. Boston Safe Deposit and Trust Co., compl't, *vs.* City of Grand Haven *et al.*, def'ts. Replication. Filed Feb. 6, 1888. John McQuewan, deputy clerk. W. A. Underwood & Andrew Howell, compl't's sol'rs.

96 UNITED STATES OF AMERICA, }
*Western District of Michigan.* }

In the Circuit Court of the United States for the Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant, }
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants. }

In this cause it is stipulated that the time for taking testimony therein be extended for the period of three months from the first day of May, 1888; and it is hereby stipulated and consented that an order to that effect be entered by the court in this cause.

Dated April 25th, 1888.

GEO. W. McBRIDE,
*Att'y for Grand Haven Water Work-, Defendant.*
W. A. UNDERWOOD &
A. HOWELL,
*Sol'rs and of Counsel for Complainant.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Company *vs.* City of Grand Haven *et al.* Stipulation extending time to take testimony. Filed Apr. 26, 1888. C. L. Fitch, clerk.

97 UNITED STATES OF AMERICA, }
*Western District of Michigan,* }

In the Circuit Court of the United States for the Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant, }
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants. }

In this cause it is stipulated that the time for taking testimony therein be extended for the period of two months from the first day of May, 1888; and it is hereby stipulated and consented that an order to that effect may be entered by the court in this cause.

Dated April 25th, 1888.

NORRIS & NORRIS,
*Sol'rs for Defendant The City of Grand Haven.*
W. A. UNDERWOOD &
A. HOWELL,
*Solicitors and of Counsel for Complainant.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity.

Boston Safe Deposit and Trust Co. *vs.* City of Grand Haven, Alvah Holmes, and Grand Haven Water Works. Stipulation to extend time for taking testimony. Filed Apr. 26, 1888. C. L. Fitch, clerk.

98 Law office of Geo. W. McBride, Akeley block.

GRAND HAVEN, MICH., *April* 27, 1888.

Clerk U. S. circuit court, Grand Rapids, Mich.

D'R SIR: I mailed to your address yesterday a stipulation in the Boston Safe — and Trust Company *vs.* The City of Grand Haven *et al.* The matter has taken a new whirl, and I send you another stipulation in the same case to-day and ask you to file it and disregard the one sent you before,

And oblige, truly yours,

GEO. W. McBRIDE,
*Att'y for Grand Haven Water Works Company.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Company, complainant, *vs.* The City of Grand Haven *et al.*, defendants. Letter from George W. McBride. Filed Apr. 28, 1888. C. L. Fitch, clerk.

99 UNITED STATES OF AMERICA, }
*Western District of Michigan.* }

In the Circuit Court of the United States for the Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant, }
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants. }

In this cause it is stipulated that the time for taking testimony therein be extended for the period of two months from the first day of May, 1888; and it is hereby stipulated and consented that an order to that effect be entered by the court in this cause.

Dated April 25th, 1888.

GEO. W. McBRIDE,
*Attorney for Defendant Grand Haven Water Works Co.*
W. A. UNDERWOOD &
A. HOWELL,
*Sol'rs & Counsel for Compl't.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Company, complainant, *vs.* The City of Grand Haven *et al.*, defendants. Stipulation. Filed Apr. 28, 1888. C. L. Fitch, clerk.

100 UNITED STATES OF AMERICA :

The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST CO.
*vs.*
THE CITY OF GRAND HAVEN, ALVA L. HOLMES, and THE GRAND HAVEN WATER WORKS.

Stipulated herein that the time for the taking of proofs in this case be, and the same hereby is, extended for two months from and after the 30th day of June, A. D. 1888.

June 27, 1888.

W. A. UNDERWOOD,
*Solicitor for Complainant.*
NORRIS & NORRIS,
*Sol'r- for Def't City of Grand Haven.*
GEO. W. McBRIDE,
*Sol'r for Def't Grand Haven Water Works.*

[Endorsed :] No. 918. U. S. — court, sixth circuit, west. dist. of Michigan, southern division. Boston Safe Deposit & Trust Co. *vs.* City of Grand Haven *et al.* Stipulation to extend time for taking proofs. Filed Jui- 2, 1888. C. L. Fitch, clerk. Norris & Norris, att'ys for def't City of G'd Haven.

101 March Term, A. D. 1888.

TUESDAY, *July* 3, 1888.

The court met pursuant to adjournment.

Present: The Honorable Henry F. Severens, district judge.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
CITY OF GRAND HAVEN, ALVAH L. HOLMES, and GRAND HAVEN WATER WORKS COMPANY, Defendant. } No. 918.

On reading and filing the stipulation of the parties to this cause, signed by their respective solicitors, it is ordered that the time for taking proofs in this cause be extended for two months from and after the 30th day of June, A. D. 1888.

102 UNITED STATES OF AMERICA :

The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST CO.
*vs.*
THE CITY OF GRAND HAVEN, ALVA L. HOLMES, and THE GRAND HAVEN WATER WORKS.

Stipulated herein that the time for the taking of proofs in this

case be, and the same hereby is, extended for two months from and after the 30th day of June, A. D. 1888.

June 27, 1888.

W. A. UNDERWOOD,
*Solicitor for Complainants.*
NORRIS & NORRIS,
*Sol'r for Def't City of Grand Haven.*
GEO. W. McBRIDE,
*Sol'r for Def't Grand Haven Water Works.*

[Endorsed :] No. 918. U. S. circuit court, western district of Michigan. The Boston Safe Deposit and Trust Company *vs.* The City of Grand Haven & others. Stipulation to extend time of taking testimony. Filed Jul. 5, 1888. C. L. Fitch, clerk.

103 The Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST CO.
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS.

Stipulated in this cause by and between counsel for the respective parties that the time for taking proofs herein be, and the same hereby is, extended to and including the 15th day of October next. It is further stipulated that this cause may be placed upon the calendar of the October term of said court, if desired, in the same manner and with the like force and effect as if the proofs had been closed before the commencement of said October term, but no hearing to be had before said October 15th.

Aug. 17, 1888.

NORRIS & NORRIS,
*Sol'rs for Def't The City of Grand Haven.*
W. A. UNDERWOOD & A. HOWELL,
*Sol'rs for Compl't.*

[Endorsed :] No. 918. U. S. circuit court, 6th circuit, west. dist., southern divis. Mich. In equity. Boston Safe Deposit and Trust Co. *vs.* City of Grand Haven *et al.* Stipulation extending time for taking proofs. Filed Aug. 31, 1888. C. L. Fitch, clerk. Norris & Norris, sol'rs for def't City of Grand Haven.

104 March Term, A. D. 1888.

TUESDAY, *September* 4, 1888.

The court met pursuant to adjournment.
Present: The Honorable Henry F. Severens, district judge.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
CITY OF GRAND HAVEN, ALVAH L. HOLMES, and GRAND HAVEN WATER WORKS COMPANY, Defendants. } No. 918.

On reading the stipulation of the parties in this cause, signed by their respective solicitors and heretofore duly filed, it is ordered that the time for taking proofs in this cause be, and the same hereby is, extended until and including the 15th day of October next.

105 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS.

Stipulated herein that the time for taking proofs in this cause be, and the same hereby is, extended from the 15th day of October until and including the first day of November, 1888.

NORRIS & NORRIS, *For City of G'd Haven.*
W. A. UNDERWOOD & A. HOWELL,
*Sol'rs & of Counsel for Compl't.*

Oct. 12, 1888.

[Endorsed:] No. 918. U. S. circuit court, west. dist. Michigan, southern division. Boston Safe Deposit and Trust Co. *vs.* Grand Haven Water Works, &c. Stipulation extending time for proofs. Filed Oct. 13, 1888. C. L. Fitch, clerk. Norris & Norris, att'y- for def't-.

106 October Term, A. D. 1888.

TUESDAY, *October* 16, 1888.

The court met pursuant to adjournment.
Present: The Honorable Henry F. Severens, district judge.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS COMPANY, Defendants. } No. 918.

On reading and filing the stipulation of the parties to this cause, signed by their respective solicitors, it is ordered that the time for taking proofs in this cause be, and the same hereby is, extended until and including the first day of November next.

107 The Circuit Court of the United States for the Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. Holmes, and The Grand Haven Water Works, Defendants.
} Entered Dec. 24, 1888.

In this cause the defendants Alvah L. Holmes and The Grand Haven Water Works having failed to appear and file their plea, answer, or demurrer to the said complainant's bill of complaint, although the time limited therefor by the rules and practice of this court has long since elapsed, on motion of W. A. Underwood and Andrew Howell, solicitors for the said complainant, it is ordered that the said bill of complaint be, and the same hereby is, taken as confessed by the said defendants, Alvah L. Holmes and The Grand Haven Water Works.

W. A. UNDERWOOD AND ANDREW HOWELL,
*Complainant's Solicitors.*

108 October Term, 1888.

MONDAY, *December* 24, 1888.

The court met pursuant to adjournment.
Present: The Honorable Henry F. Severens, district judge.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS.
} No. 918.

By consent of counsel for the respective parties in this cause it is ordered that all depositions heretofore received and filed in this cause be, and the same hereby are, opened.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.
} No. 918.

This cause, coming regularly on to be heard upon pleadings and proofs as to the said defendant, The City of Grand Haven, and upon the bill of complaint taken as confessed by the said defendants, Alvah L. Holmes and The Grand Haven Water Works, was fully argued by Messrs. Andrew Howell and Alfred Russell, of counsel for said complainant, and Messrs. Norris & Norris, of counsel for said defendant, The City of Grand Haven, and thereupon the court took the same under advisement.

109 October Term, A. D. 1888.

THURSDAY, *January* 17, 1889.

The court met pursuant to adjournment.
Present: The Honorable Henry F. Severens, district judge.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS. } No. 918.

This cause having at a previous day of this term been heard upon pleadings and proofs and submitted by counsel for the respective parties, it is now ordered by the court that a reargument of this cause be had.

110 UNITED STATES OF AMERICA:

In the Circuit Court of the United States of America for the Sixth Circuit and Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST CO.
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and GRAND HAVEN WATER WORKS.

SIR: Please take notice that the above-entitled cause will be brought on for rehearing at the next term of said court before circuit judge, to be held at the court-rooms, in the city of Grand Rapids, in said district, on the 5th day of March, A. D. 1889.

Dated February 13th, 1889.

Yours, etc., NORRIS & NORRIS,
*Solicitors for Def't.*

City of Grand Haven.

To W. A. Underwood, solicitor for complainant.

UNITED STATES OF AMERICA, *Western District of Michigan,* } *ss:*

Willard I. Brigham, being duly sworn, deposes and says that on the 13th day of February, 1889, he served a notice, of which the above is a true copy, on W. A. Underwood, solicitor for the complainant in the above-entitled cause, by mailing the same at the Grand Rapids post office, postage prepaid and properly addressed, "W. A. Underwood, att'y-at-law, Detroit, Mich."

WILLARD I. BRIGHAM.

Subscribed and sworn to before me this 13th day of February, A. D. 1889.

NETTIE B. NIXON,
*Notary Public, Kent Co., Mich.*

[Endorsed:] No. 918. U. S. circuit court for western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Co. *vs.* City of Grand Haven *et al.* Notice of rehearing. Filed Feb. 13, 1889. C. L. Fitch, clerk. Norris & Norris, sol'rs for def't, City G'd Haven.

111 The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

And now comes the said complainant and move- for leave to amend bill in this cause at the hearing thereof on Tuesday, the 21st day of May, 1889, by inserting in paragraph 24 the word "ten" before the word "thousand" in place of the word "two," upon the ground that it appears by the testimony in said cause, as well as by the averment in paragraph 22 of the bill, that the matter in dispute or the amount in controversy in this cause, exclusive of costs, exceeds the sum or value of ten thousand dollars.

A. HOWELL AND W. A. UNDERWOOD,
*Solicitors and of Counsel for Complainants.*

STATE AND EASTERN DISTRICT OF MICHIGAN, *ss:*

MAY 18TH, 1891.

Personally appeared before me, at my office, in Detroit, in said county, Andrew Howell and made oath that the complainant and officers are absent from the State of Michigan, and that he is solicitor and agent of the complainant, and that the matter in dispute or the amount in controversy in this cause, exclusive of costs, exceeds the sum or value of ten thousand dollars.

ANDREW HOWELL.
FREDERIC A. SUTHERLAND,
*Notary Public, Wayne County, Michigan.*

To Messrs. Norris & Norris, solicitors for defendants:

112 You are herewith served with a copy of a motion to amend the bill at the hearing, and are notified that said motion will be called up at the hearing on Tuesday, the 21st day of May inst., at the opening of court, at Grand Rapids, or as soon thereafter as counsel can be heard.

A. HOWELL & W. A. UNDERWOOD,
*Solicitors and of Counsel for the Complainant.*

Dated May 18th, 1889.

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[Endorsed:] No. 918. Circuit c't U. S., 6th cir., S. D., west. dist. Mich. In equity. The Boston Safe Deposit and Trust Company *vs.* The City of Grand Haven *et al.* Motion to amend bill. A. Howell & W. A. Underwood, compl't's sol'rs. Filed May 20, 1889. C. L. Fitch, clerk.

113 The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity. March Term, A. D. 1889.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant, *vs.* THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants. } Entered May 20, 1889.

And now comes the said complainant and move for leave to amend bill in this cause at the hearing thereof, on Tuesday, the 21st day of May, 1889, by inserting in paragraph 24 the word "ten" before the word "thousand" in the place of the word "two" upon the ground that it appears by the testimony in said cause as well as by the averment in paragraph 22 of the bill that the matter in dispute or the amount in controversy in this cause, exclusive of costs, exceeds the sum or value of ten thousand dollars.

A. HOWELL AND W. A. UNDERWOOD,
*Solicitors and of Counsel for Complainants.*

114 March Term, A. D. 1889.

TUESDAY, *May* 21, 1889.

The court met pursuant to adjournment.
Present: The Honorable Henry F. Severens, district judge.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant, *vs.* THE CITY OF GRAND HAVEN, ALVAH L. HOLMES and THE GRAND HAVEN WATER WORKS, Defendants. } No. 918.

This cause came on this day to be heard upon the motion of the said complainant heretofore duly filed and entered herein to amend its bill of complaint in this cause, and after hearing Andrew Howell, of counsel for said complainant, in support of said motion, Mark M. Norris, of counsel for said defendants, in open court waiving objection to the allowance of said motion, it is ordered that said motion be, and the same hereby is, granted, and that said complainant have, and hereby is granted, leave to amend its said bill of complaint by inserting in paragraph 24 of said bill the word "ten" before the word "thousand" in place of the word "two," so that said paragraph as amended will read as follows:

"24th. And your orator further shows that the amount in controversy herein and for which this suit is brought exceeds the sum or value of ten thousand dollars, exclusive of interest and costs."

115 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

*Amendments to the Bill of Complaint in This Cause Made Pursuant to an Order of This Court Dated the 21st Day of May, 1889.*

Insert in paragraph twenty-four of the bill the word "ten" before the word "thousand" in place of the word "two," so that said paragraph as amended will read as follows:

"24th. And your orator further shows that the amount in controversy herein and for which this suit is brought exceeds the sum or value of ten thousand dollars, exclusive of interest and costs."

A. HOWELL,
*Solicitor for Complainant.*

UNITED STATES OF AMERICA,
*Western District of Michigan.*

STATE OF MICHIGAN,
*Kent County,* } *ss:*

On this 21st day of May, 1889, before me, a United States commissioner in and for said district, personally came Andrew Howell, to me known, and made oath that he is solicitor for the complainant in the cause in which the foregoing amendments of bill of complaint are made; that as such solicitor he signed said amendments for the complainant and is authorized so to do; that he signed said amendments and makes oath thereto for the reason that there is no officer of said complainant within this State to sign same and make oath thereto, and that he has read the bill of complaint in
116 said cause and knows the contents thereof, and that he has also read the foregoing amendment to said bill and knows the contents thereof, and says that the matter in said amendment contained and set forth is true of his own knowledge, as he verily believes.

CHARLES L. FITCH,
*United States Commissioner.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. The Boston Safe Deposit and Trust Company *vs.* The City of Grand Haven *et al.* Amendment of bill. Filed May 21, 1889. C. L. Fitch, clerk. Amendment.

117 March Term, A. D. 1889.

WEDNESDAY, *May* 22, 1889.

The court met pursuant to adjournment.
Present: Honorable Henry F. Severens, district judge.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants. } No. 918.

This cause having been heretofore reargued by counsel for the respective parties and submitted to the court, and due consideration thereon having been had, and it appearing to the court that it hath no jurisdiction in the premises, it is therefore by the court ordered, adjudged, and decreed that the bill of complaint herein be dismissed out of this court, but without prejudice to the said complainant.

And thereupon, the said complainant praying an appeal in open court from said decree, the said appeal is hereby allowed, and the bond upon said appeal is hereby fixed at the sum of three hundred dollars ($300).

118 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

It is hereby stipulated that the testimony and depositions of Edward P. Bond, of Boston, in the State of Massachusetts, a witness on the part of the complainant in the above-entitled cause, may be taken under and by virtue of this stipulation and without any other warrant or authority, either from said court or otherwise, by and before John W. Shepard, a notary public residing at the city of Boston, in the State of Massachusetts, upon the interrogatories hereto annexed.

That such testimony and depositions may be taken at such time and place at Boston aforesaid as shall suit the convenience of said notary and the said witness and without the presence or attendance of any of the parties in this cause or their solicitors or counsel.

That said witness may be sworn by said notary and his testimony and depositions, when taken and reduced to writing by said notary or under his direction and signed by said witnesses, and attached hereto and certified by said notary, may be forwarded by said notary by mail to Charles L. Fitch, clerk of the United States circuit court, at Grand Rapids, Michigan, and that the testimony and

depositions so taken and filed in this cause may be read and used in evidence upon the hearing of said cause with the same force and effect as if said testimony and depositions were taken before an examiner of this court in the presence of the parties or their solicitors or counsel, but subject to objection as to competency, relevancy, and materiality, said objections, if any, to be made at the hearing.

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Dated Sept. 28, 1888.

W. A. UNDERWOOD & A. HOWELL,
*Sol'rs and of Counsel for Compl't.*
NORRIS & NORRIS,
*Sol'rs for Def't City of Grand Haven.*
GEO. W. McBRIDE,
*Sol. for Grand Haven Water Works.*

Interrogatories to be administered under and by authority of the foregoing and annexed stipulation to Edward P. Bond, of Boston, Massachusetts, a witness on the part of the complainant in the cause mentioned in the entitling of said stipulation.

First. What is your name, age, residence, and occupation.

Second. Have you any knowledge of The Boston Safe Deposit and Trust Company, the complainant named in the entitling of the said annexed stipulation? If yea, state whether said complainant is a corporation; and, if it is, state whether you are the secretary thereof and have charge of its records; and, if you know, state when and by what name and by what authority it was incorporated, when did it go into operation, where is its principal business office, and of what State is it a citizen.

Third. What was the amount of the capital stock of the complainant when it was incorporated and how much thereof was paid in in cash before the company went into operation? Was any certificate given to the corporation by the insurance commissioner of Massachusetts, authorizing it to go into operation? If so, when? And annex a copy of said certificate to your deposition and certified copies of the acts of incorporation of the company.

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Fourth. Was the name of said corporation changed; and, if so, by what authority and what was the change? If such change was by act of the legislature, state whether said act was accepted by the corporation; and, if so, when and how.

Fifth. Was the act, chapter 245 of the Acts of 1877 of the Legislature of the State of Massachusetts, entitled "An act to amend the charter of the Boston Safe Deposit and Trust Company" ever accepted by said corporation; and, if so, when and in what manner?

W. A. UNDERWOOD & A. HOWELL,
*Of Counsel for Compl't.*

Deposition of Edward P. Bond, of the city of Newton, in the Commonwealth of Massachusetts, a witness produced, sworn, and examined on the eleventh day of October, at 87 Milk street, in the city of Boston, in the Commonwealth of Massachusetts, by virtue of the foregoing and annexed stipulation, bearing date September 28th, 1888, made in the cause pending in the circuit court of the United States for the sixth circuit and southern division of the western district of Michigan, in equity, wherein The Boston Safe Deposit and Trust Company is complainant and The City of Grand Haven, Alvah L. Holmes, and The Grand Haven Water Works are defendants, and directed to me for the examination of the said Edward P. Bond as a witness in said cause on the part of the complainant therein.

Having read the said stipulation and the directions therein and having publicly administered to the said witness an oath that the answers which should be given by him to the interrogatories proposed to him and annexed to the said stipulation should be the truth, the whole truth, and nothing but the truth, I proceeded to the examination of the said witness, who testified as follows:

121 First. To the first interrogatory the witness says: My name is Edward P. Bond; my age is sixty-four years and upwards; I reside in the city of Newton, Massachusetts, and my occupation—I am manager and secretary of the Boston Safe Deposit and Trust Company, of Boston, Massachusetts.

Second. To the second interrogatory the witness says: I am acquainted with the Boston Safe Deposit and Trust Company, the complainant named in the entitling of the stipulation hereto attached.

The said Boston Safe Deposit and Trust Company is a corporation, and I am the secretary thereof and have the charge and keeping of its records of the proceedings of the corporation.

The said complainant was incorporated by the name of the "Boston Safe Deposit Company" by an act of the general court of the Commonwealth of Massachusetts passed in 1867, entitled "An act to incorporate the Boston Safe Deposit Company," a certified copy of which from the office of the secretary of the Commonwealth is hereto annexed and marked "Exhibit No. 1," and by three amendatory acts of said general court, certified copies of which from the office of the secretary of the Commonwealth are hereto attached and marked respectively "Exhibits 'No. 2,' 'No. 3,' and 'No. 4.'"

Said corporation went into operation in the year A. D. 1875. Its principal business office is in the city of Boston, and it is a citizen of the Commonwealth of Massachusetts.

Third. To the third interrogatory the witness says: The amount of the capital stock of the complainant, The Boston Safe Deposit Company, when it was incorporated was two hundred thou-
122 sand dollars ($200,000), the amount when it went into operation was four hundred thousand dollars ($400,000), and two

hundred thousand dollars ($200,000) thereof was paid in in cash before the company went into operation.

Before commencing business a certificate was given to the corporation by the insurance commissioner of the Commonwealth of Massachusetts on or about the first day of June, A. D. 1875, authorizing it to go into operation, a copy of which certificate from the said insurance commissioner is hereto annexed and marked "Exhibit No. 5."

Fourth. To the fourth interrogatory the witness says:

By an act of the general court of the Commonwealth of Massachusetts passed in 1874, a certified copy of which is hereto annexed and marked "Exhibit No. 2," the corporate name of the "Boston Safe Deposit Company" was changed to the "Boston Safe Deposit and Trust Company."

The said last-mentioned act of the general court changing the name of the company was accepted by the company by a vote of the stockholders of the Boston Safe Deposit Company at a meeting duly called for the purpose, in accordance with the by-laws of the corporation. A copy of the company's records of the vote and proceedings of the stockholders accepting said act is hereto annexed and marked "Exhibit No. 6," and a certificate duly signed by the president, secretary, and a majority of the directors of said corporation stating that said act had been accepted was duly filed with the secretary of the Commonwealth, and a copy of said certificate so filed, certified from the office of the secretary of the Commonwealth, is hereto annexed and marked "Exhibit No. 7."

Fifth. To the fifth interrogatory the witness says:

The act, chapter 245 of the acts of 1877 of the general court of Massachusetts, entitled "An act to amend the charter of the
123 Boston Safe Deposit and Trust Company," a certified copy of which is hereto annexed and marked "Exhibit No. 4," was also duly accepted by the corporation on the 28th day of May, A. D. 1877. A copy of the record of the proceedings of the corporation accepting said last-mentioned act is hereto annexed and marked 'Exhibit No. 8," which acceptance, with the date thereof, was within ten days thereafter certified by the president of the corporation to the secretary of the Commonwealth of Massachusetts; a copy of which certificate of acceptance, so filed with the secretary and duly certified from the office of said secretary of the Commonwealth, is hereto annexed and marked "Exhibit No. 9."

EDWARD P. BOND.

(EXHIBIT No. 1. John W. Shepard, Notary Public.)

(CHAPTER 151.)

Commonwealth of Massachusetts, in the year one thousand eight hundred and sixty-seven.

An act to incorporate the Boston Safe Deposit Company.

Be it enacted by the senate and house of representatives in general court assembled, and by the authority of the same as follows:

SECTION 1. Samuel H. Walley, William Ropes, William Endicott, Junior, their associates and successors, are hereby made a corporation by the name of the Boston Safe Deposit Company, for the purpose of receiving on deposit for safe keeping, Government securities, stocks, bonds, coin, jewelry, plate, valuable papers and documents, and other property of every kind, and of collecting and disbursing the interest or income on such of said property received on
124 deposit as produces interest or income, and of collecting and disbursing the principal of such of said property as produces interest or income, when it comes due, upon terms to be prescribed by the corporation: with all the powers and privileges, and subject to the duties, restrictions and liabilities set forth in the sixty-eighth chapter of the General Statutes, and in all the general laws which now or hereafter may be in force, relating to such corporations.

SECTION 2. The seventy-third, seventy-fourth, seventy-fifth, seventy-sixth and seventy-seventh sections of the fifty-seventh chapter of the General Statutes shall apply to, and be in force against this company, in the same manner and to the same extent as they apply to and are in force against banks: and sections thirteen, fourteen, seventeen, nineteen, twenty, twenty-one, twenty-seven, twenty-eight and twenty-nine of the fifty-eighth chapter of the General Statutes, shall apply to and be in force against this company, in the same manner and to the same extent, as they apply to and are in force against insurance companies.

SECTION 3. The capital stock of said corporation shall be two hundred thousand dollars, with the privilege to increase the same to five hundred thousand dollars: and said capital stock shall be invested in the manner provided by law for investing the capital stock of insurance companies.

SECTION 4. The company shall not go into operation until one-half of its capital stock has been paid in, in cash, and a certificate from the insurance commissioner has been obtained, authorizing the company to go into operation: and said commissioner shall make the examination in the same manner as he is now required to do in the case of insurance companies by section thirty of chapter
125 fifty-eight of the General Statutes, upon payment into the treasury of any fees which are or may be prescribed to be paid by insurance companies in similar cases.

SECTION 5. Said corporation shall be entitled to purchase and hold real estate, not exceeding in value two hundred thousand dollars.

SECTION 6. Chapter two hundred and seventy-two of the acts of the year eighteen hundred and sixty-five is hereby repealed.

SECTION 7. This act shall take effect upon its passage.

House of representatives, April 10th, 1867.
Passed to be enacted.

JAMES M. STONE, *Speaker.*

In senate, April 11, 1867.
Passed to be enacted.

JOSEPH A. POND, *President.*

April 13, 1867.
Approved:

ALEX. H. BULLOCK.

SECRETARY'S DEPARTMENT, BOSTON, *June* 22, 1888.

A true copy.
Witness the seal of the Commonwealth.

[Seal of the Commonwealth of Massachusetts.]

HENRY B. PEIRCE,
*Secretary of the Commonwealth.*

126 (EXHIBIT No. 2. John W. Shepard, Notary Public.)

(CHAPTER 373.)

Commonwealth of Massachusetts, in the year one thousand eight hundred and seventy-four.

An act to amend an act to incorporate the Boston Safe Deposit Company.

Be it enacted by the senate and house of representatives in general court assembled, and by the authority of the same as follows:

SECTION 1. The corporate name of the "Boston Safe Deposit Company" is changed to the "Boston Safe Deposit and Trust Company."

SECTION 2. Said corporation may act as agent for the purpose of issuing, registering or countersigning the certificates of stock, bonds or other evidences of indebtedness of any corporation, association, municipality, State or public authority, on such terms as may be agreed upon.

SECTION 3. Any court of law or of equity, including courts of probate and insolvency, of this State may, by decree or otherwise, direct any moneys or properties under its control, or that may be paid into court by parties to any legal proceedings, or which may be brought into court by reason of any order or judgment in equity or otherwise, to be deposited with said corporation, upon such terms and subject to such instructions as may be deemed expedient: Provided, however, that said corporation shall not be required to assume or execute any trust without its own consent. Said corporation shall also have power to receive and hold moneys or property in trust, or on deposit from executors, administrators, assignees, guardians, trustees, corporations or individuals, upon such terms and conditions as may be obtained or agreed upon, and such de-
127 posits or transfers of property in trust, when so made by such court or persons, shall be taken to be a lawful investment and disposition thereof.

SECTION 4. All moneys or property received under the third section of this act, unless by the terms of the trust some other mode of investment is prescribed, together with the capital of the corporation, shall be loaned or invested only in the authorized loans of the

United States, or any of the New England States, or of cities of such States, or counties or towns of this State, or stocks of State or national banks organized within this Commonwealth, or the first-mortgage bonds of any railroad company incorporated by any of the New England States which has earned and paid regular dividends on its stock for two years next preceding such loan or investment, or the bonds of any such railroad company which is unencumbered by mortgage, or first mortgages on real estate within this Commonwealth, or upon notes of manufacturing corporations created under the laws of this Commonwealth, with two sureties, or of individuals with a sufficient pledge of any of the aforesaid securities or in any securities in which savings banks of this State are allowed to invest, or may be loaned to the Commonwealth or to any county, city or town therein; but all real estate acquired by foreclosure of mortgage, or by levy of execution, shall be sold at public auction within two years thereafter.

SECTION 5. All money or property held in trust under the third section shall constitute a special deposit, and the accounts thereof shall be kept separate, and such funds, and the investments or loans of them, shall be specially appropriated to the security and payment of such deposits, and not be subject to any other liabilities of the corporation; and for the purpose of securing the observance of this proviso, said corporation shall have a trust department, in
128 which all business pertaining to such trust property shall be kept separate and distinct from its general business.

SECTION 6. Said corporation shall at all times have on hand, in lawful money of the United States, as a reserve, an amount equal to fifteen per centum of all deposits payable on demand, or within ten days; and when said reserve shall be below such per centum of said deposits, said company shall not make new loans nor make any dividend of its profits until the required proportion between the aggregate amount of its deposits and its reserve shall be restored: Provided, that clearing-house certificates representing specie or lawful money, specially deposited for the purpose, of any clearing-house association, of which said corporation may be a member, may be reckoned as a part of said reserve: Provided, further, that one-third of said fifteen per centum may consist of balances due and payable on demand from any national bank in this Commonwealth which has been approved by the commissioner of savings banks, and one other third of said fifteen per centum may consist of bonds of the United States or of this Commonwealth, the absolute property of said corporation.

SECTION 7. Said corporation shall semi-annually make a return to the commissioner of savings banks in this Commonwealth, on the second Mondays of May and November, and at two other times during the year when said commissioner shall from time to time by written notice direct the same to be made, which shall be signed and sworn to by a majority of its board of directors; and said return shall specify the following, namely: capital stock: amount of all moneys and property, in detail, in the possession or charge of said company as deposits, trust funds, or for purposes of investment;

number of depositors; investment in authorized loans of the
129 United States or of any of the New England States, or cities, or counties, or towns, stating amount in each: invested in bank stock, stating amount in each: invested in railroad stock, stating amount in each: invested in railroad bonds, stating amount in each: loans on notes of corporations: loans on notes of individuals: loans on mortgage of real estate: cash on hand, all as existing at date of making such return, with the rate, amount and date of dividends since last return: and the commissioner of savings banks shall have access to the vaults, books and papers of the company, and it shall be his duty to inspect, examine and inquire into its affairs, and to take proceedings in regard to them in the same manner and to the same extent as if such corporation were a savings bank, subject to all the laws which now are or hereafter may be in force relating to such institutions in this regard. An abstract of each such report, showing the resources and liabilities of the corporation, in a form to be approved by said commissioner, shall be published in a newspaper published in the city of Boston to be designated by said commissioner, at the expense of said corporation.

SECTION 8. Said corporation shall be subject to the provisions of chapter two hundred and eighty-three of the acts of the year eighteen hundred and sixty-five, and any acts now existing or which may hereafter be passed in amendment or lieu thereof.

SECTION 9. Said corporation shall annually between the first and tenth days of May, return to the tax commissioner a true statement, attested by the oath of the president, treasurer or actuary of the corporation, of all personal property held upon any trust on the first day of May, which would be taxable if held by an individual trustee residing in this Commonwealth, and the name of every city and town in this Commonwealth where any beneficiary resided on said day, and the aggregate amount of such property then held for all beneficiaries resident in each of such cities and towns, and
130 all the aggregate amount held for beneficiaries not resident in this Commonwealth, under the pains and penalties provided in section fourteen of chapter two hundred and eighty-three of the acts of the year eighteen hundred and sixty-five, and acts in amendment thereof, for corporations failing to make the returns provided in said act. Said corporation shall annually pay to the treasurer of the Commonwealth a sum to be ascertained by assessment of the tax commissioner, upon an amount equal to the total value of such property, at the rate ascertained and determined by him, under section five of chapter two hundred and eighty-three of the acts of the year eighteen hundred and sixty-five, and acts in amendment thereof.

SECTION 10. Said corporation shall also annually, between the first and tenth days of May, return to the tax commissioner a true statement verified by the oath of the president and treasurer or actuary of the corporation of the amount of all sums deposited with it on interest or for investment, other than those specified in the ninth and twelfth sections of this act, together with the name

of every city and town in this Commonwealth were any benficiary owner resided on said first day of May, and the aggregate amount of such deposits then held for the benefit of persons residing in each of such cities and towns, under a like penalty. Said corporation shall annually pay to the treasurer of the Commonwealth a sum to be ascertained by assessment of the tax commissioner upon an amount equal to the total value of such deposits at three-fourths of the rate ascertained and determined by him under section five of chapter two hundred and eighty-three of the acts of the year eighteen hundred and sixty-five, and acts in amendment thereof.

SECTION 11. No taxes shall be assessed in any city or town
131 for State, county or town purposes, upon or in respect of any such property held in trust or any such amounts deposited on interest or for investment as are specified in the two preceding sections; but such proportion of the sum so paid by said corporatios as corresponds to the amount of such property held for beneficiaries or payable to persons resident in this Commonwealth, shall be credited and paid to the several cities and towns where it appears from the returns or other evidence that such beneficiaries resided on the first day of May next preceding, according to the aggregate amount so held for beneficiaries and persons residing in such cities and towns respectively; and in regard to such sums so to be assessed and paid as aforesaid, said corporation shall be subject to sections eleven, twelve, thirteen, the last paragraph of section fifteen and section seventeen of chapter two hundred and eighty-three of the acts of the year eighteen hundred and sixty-five, and acts in lieu or amendment thereof, so far as the same are applicable thereto.

SECTION 12. Deposits with said corporation which can be withdrawn on demand or within ten days shall for the purposes of taxation be deemed money in possession of the person to whom the same is payable.

SECTION 13. The shareholders of said corporation shall be held individually liable, equally and ratably, and not one for another, for all contracts, debts and engagements of such corporation to the extent of the amount of their stock therein at the par value thereof, in addition to the amount invested in such shares. The provisions contained in chapter two hundred and twenty-four of the acts of the year eighteen hundred and seventy, sections forty to forty-nine inclusive, shall apply to and regulate the enforcement of this liability:

Provided, however, thati n case proceedings shall be taken
132 for winding up the business of said corporation by the appointment of receivers or trustees under the direction of the supreme judicial court, as is provided by law, in the case of savings banks, and it shall appear that there is not a sufficiency of assets to discharge the liabilities of the corporation without resort to the liability herein imposed upon the shareholders, a bill in equity, as provided in the forty-second section of said act, shall be filed by such receivers or trustees. No creditor shall after the appointment of such receivers or trustees, be allowed to file any such bill, and such receivers or trustees may be substituted as plaintiffs in any

such bill which is pending at the time of their appointment, at any time before final decree.

SECTION 14. Section two of chapter one hundred and fifty-one of the acts of the year eighteen hundred and sixty-seven, entitled An act to incorporate the Boston Safe Deposit Company and so much of section three of said chapter as relates to the investment of the capital stock of said company are hereby repealed.

SECTION 15. This act shall take effect whenever the stockholders of the Boston Safe Deposit Company, at a meeting duly called for the purpose in accordance with the by-laws of the corporation shall have voted to accept the same. And thereupon a certificate duly signed by the president, secretary and a majority of the directors of said corporation, stating that said act has been accepted shall be filed with the secretary of state.

House of representatives, June 24, 1874.
Passed to be enacted.

JOHN E. SANFORD, *Speaker.*

In senate, June 25, 1874.
Passed to be enacted.

GEO. B. LORING, *President.*

June 27, 1874.
Approved:

THOMAS TALBOT.

SECRETARY'S DEPARTMENT, BOSTON, *June* 22, 1888.

A true copy.
Witness the seal of the Commonwealth.
[Seal of the Commonwealth of Massachusetts.]

HENRY B. PEIRCE,
*Secretary of the Commonwealth.*

133 (EXHIBIT No. 3. John W. Shepard, Notary Public.)

(CHAPTER 123.)

Commonwealth of Massachusetts. In the year one thousand eight hundred and seventy-five.

An act to amend an act to incorporate the Boston Safe Deposit and Trust Company.

Be it enacted by the senate and house of representatives in general court assembled, and by the authority of the same as follows:

SECTION 1. The shares of the Boston Safe Deposit and Trust Company shall be assignable and transferable according to such rules and regulations as the stockholders shall for that purposes ordain and establish, and not otherwise.

SECTION 2. This act shall take effect upon its passage.

House of representatives, April 9, 1875.
Passed to be enacted.

JOHN E. SANFORD, *Speaker.*

In senate, April 12, 1875.
Passed to be enacted.

GEO. B. LORING, *President.*

APRIL 14, 1875.

Approved:
WM. GASTON.

SECRETARY'S DEPARTMENT, BOSTON, *June* 22, 1888.

A true copy.
Witness the seal of the Commonwealth.

[Seal of the Commonwealth of Massachusetts.]

HENRY B. PEIRCE,
*Secretary of the Commonwealth.*

134 (EXHIBIT No. 4. John W. Shepard, Notary Public.)

(CHAPTER 245.)

Commonwealth of Massachusetts. In the year one thousand eight hundred and seventy-seven.

An act to amend the charter of the Boston Safe Deposit and Trust Company.

Be it enacted by the senate and house of representatives in general court assembled, and by the authority of the same as follows:

SECTION 1. The Boston Safe Deposit and Trust Company may from time to time increase its capital stock to an amount not exceeding one million dollars.

SECTION 2. The said company may be appointed a trustee under any will or instrument creating a trust for the care and management of property, under the same circumstances, in the same manner, and subject to the same control by the court having jurisdiction of the same, as in the case of a legally qualified person. The capital stock of said corporation, with the liabilities of the stockholders existing thereunder, shall be held as security for the faithful discharge of the duties undertaken by virtue of this act, and no surety shall be required upon the bonds filed by said corporation. In all proceedings in the probate court or elsewhere, connected with any authority exercised under this act, all accounts, returns and other papers may be signed and sworn to, in behalf of the corporation, by any officer thereof duly authorized by it; and the answers and examinations under oath of such officer shall be received as the answers and examinations of the corporation, and the court may order and compel any and all officers of said corporation to
135 answer and attend said examinations in the same manner as if they were parties to the proceedings or inquiry instead of the corporation: Provided, however, that said corporation shall not be required to receive or hold any property or moneys or to execute any trust contrary to its own desire.

SECTION 3. In the management of money and property held by it as trustee under the powers conferred in the foregoing section, said corporation shall invest the same in the general trust fund of the company: Provided, that it shall be competent for the authority making the appointment to direct, upon the conferring of the same, whether such money and property shall be held separately or invested in the general trust fund of the company: And provided, also, that said corporation shall always be bound to follow and be entirely governed by all directions contained in any will or instrument under which it may act.

SECTION 4. No money, property, or securities received or held by said company under the provisions of this act, shall be mingled with the investments of the capital stock, or other moneys or property belonging to said corporation, or be liable for the debts or obligations thereof.

SECTION 5. The returns of said corporation required to be made to the commissioner of savings banks shall be in the form of a trial balance of its books, and shall specify the different kinds of its liabilities and the different kinds of its assets, stating the amount of each kind, in accordance with a blank form to be furnished by said commissioners; and these returns shall be published in a newspaper of the city of Boston at the expense of said corporation, and in the annual report of said commissioners.

SECTION 6. This act shall take effect upon its acceptance by said corporation, which acceptance with the date thereof, shall
136 within ten days thereafter be certified by the president to the secretary of the Commonwealth.

House of representatives, May 15, 1877.
Passed to be enacted.

JOHN D. LONG, *Speaker.*

In senate, May 16, 1877.
Passed to be enacted.

JNO. B. D. COGSWELL, *President.*

May 16, 1877.

Approved:
ALEXANDER H. RICE.

SECRETARY'S DEPARTMENT, BOSTON, *June* 23, 1888.

A true copy.
Witness the seal of the Commonwealth.

[Seal of the Commonwealth of Massachusetts.]

HENRY B. PEIRCE,
*Secretary of the Commonwealth.*

(EXHIBIT No. 5. John W. Shepard, Notary Public.)

Commonwealth of Massachusetts, insurance department, 33 Pemberton square.

BOSTON, *June* 1, 1875.

Know all men by these presents that—

Whereas the Boston Safe Deposit and Trust Company, a corporation existing under the laws of this Commonwealth, is, by the terms of its charter, authorized to go into operation when one-half of its capital stock has been paid in in cash;

Whereas it appears by an examination this day made by the undersigned deputy insurance commissioner of the Commonwealth that said provision of its charter has been complied with:

137

Now, therefore, this is to certify that said company is legally authorized to transact the business for which it was incorporated, agreeably to the terms of its charter.

In testimony whereof I have hereunto set my hand and affixed the official seal of this department this first day of June, A. D. 1875.

[SEAL.]

BENJ. C. DEAN,
*Deputy Insurance Commissioner.*

A true copy of a certificate on file with the Boston Safe Deposit and Trust Co.

[Seal of Boston Safe Deposit and Trust Co.]

EDWARD P. BOND, *Secretary.*

Boston Safe Deposit and Trust Co., 87 Milk street. F. M. Stone, president; Frank C. Miles, treasurer; Edward P. Bond, manager safe deposit department.

SAFE DEPOSIT DEPARTMENT,
BOSTON, ——— —, 188–.

(EXHIBIT No. 6. John W. Shepard, Notary Public.)

At a meeting of the stockholders duly called and held July 7th, 1874, the secretary read the act to amend the act of incorporation; on motion it was unanimously voted that the act be accepted.

A true copy from the records of the Boston Safe Deposit Company. Attest:

[Seal of Boston Safe Deposit and Trust Co.]

EDWARD P. BOND, *Secretary.*

138 (EXHIBIT No. 7. John W. Shepard, Notary Public.)

BOSTON, *July 7th*, 1874.

Hon. Oliver Warner, secretary of state.

SIR: We hereby certify that at a meeting of the stockholders of the Boston Safe Deposit Company duly called for the purpose in accordance with the by-laws of the corporation and held this day it was unanimously vowed to accept "An act to amend an act to incorporate the Boston Safe Deposit Company," passed by the general *court* and approved by the governor June 27, 1874.

F. W. LINCOLN, *President.*
EDWARD BOND, *Secretary.*
F. M. JOHNSON,
GEO. BOND,
JOHN H. THORNDIKE,
OLIVER DITSON,
NATH. BRADLEE,
F. W. LINCOLN,
M. D. ROSS,
*A Majority of the Directors.*

Commonwealth of Massachusetts, secretary's department.

BOSTON, *June* 29, 1888.

I certify that the foregoing is a true copy of the acceptance of chapter 373 of the Acts of 1874, entitled "An act to amend an act to incorporate the Boston Safe Deposit Company," filed in this department, July 14, 1874.

Witness the seal of the Commonwealth.

[Seal of the Commonwealth of Massachusetts.]

ISAAC H. EDGETT,
*Deputy Secretary of the Commonwealth.*

139 Boston Safe Deposit & Trust Co., 87 Milk street. F. M. Stone, president; Frank C. Miles, treasurer; Edward P. Bond manager of safe deposit department.

SAFE DEPOSIT DEPARTMENT,
BOSTON, ——— —, 188–.

(EXHIBIT No. 8. John W. Shepard, Notary Public.)

At a special meeting of the stockholders of the Boston Safe Deposit and Trust Company to see if said corporation would accept an act to amend the charter of the Boston Safe Deposit and Trust Company, passed May 16, 1877, said meeting having been duly called and held May 28, 1877, Mr. Stevens moved that said act be accepted. A stock vote upon the motion being called for, the chair appointed Mr. E. M. McPherson a committee to collect, assort, and count the votes; the committee reported that the whole number of

votes cast was 21, representing 1,301 shares, all of which were in the affirmative, and the president declared that the act had been accepted.

A true copy from the records of the Boston Safe Deposit and Trust Company.

Attest:

[Seal of Boston Safe Deposit and Trust Company.]

EDWARD P. BOND, *Secretary.*

(EXHIBIT No. 9. John W. Shepard, Notary Public.)

Boston Safe Deposit and Trust Company, Post-office square, corner Milk and Congress streets.

BOSTON, *May* 28, 1877.

SIR: In accordance with section six of "An act to amend
140 the charter of the Boston Safe Deposit and Trust Company," approved May 16, 1877, I hereby inform you that at a duly called meeting of said corporation held this day, a quorum of stockholders being present, upon motion made, a stock vote being taken, said act was unanimously accepted.

Respectfully your obedient servant,

F. M. JOHNSON,
*President Boston Safe Deposit & Trust Co.*

Hon. Henry B. Pierce, secretary of the Commonwealth of Massachusetts.

Commonwealth of Massachusetts, secretary's department.

BOSTON, *June* 29, 1888.

I certify that the foregoing is a true copy of the acceptance of chapter 245 of the Acts of 1877, entitled "An act to amend the charter of the Boston Safe Deposit and Trust Company," filed in this department May 28, 1877.

Witness the seal of the Commonwealth.

[Seal of the Commonwealth of Massachusetts.]

ISAAC H. EDGETT,
*Deputy Secretary of the Commonwealth.*

To the circuit court of the United States for the southern division of the western district of Michigan, in equity:

I, John W. Shepard, the notary public named in the foregoing and annexed stipulation, residing in the city of Boston, in the State of Massachusetts, and being a notary public in and for said city and in and for the county in which the said city is situate,
141 do hereby certify that upon the coming to me of the annexed stipulation and interrogatories thereto attached I did, on the eleventh day of October, 1888, cause the witness, Edward P. Bond, named in said stipulation to come before me at 87 Milk street, in said city of Boston, for the purpose of giving his testimony

and deposition in pursuance of said stipulation; and thereupon I, as such notary, publicly administered an oath to said witness that the answers given by him to the said annexed interrogatories proposed to him in the cause mentioned in the entitling of said stipulation, wherein The Boston Safe Deposit and Trust Company is complainant and The City of Grand Haven, Alvah L. Holmes, and The Grand Haven Water Works are defendants, should be the truth, the whole truth, and nothing but the truth, and, on being so sworn, each of the said interrogatories were separately and distinctly read to him and he was examined by me touching the matters therein referred to, and upon such examination the said Edward P. Bond testified in the manner and form as set forth in his deposition hereto annexed; which said testimony and deposition *was* then reduced to writing by me and subscribed by the said witness, and each sheet of said deposition is also subscribed by me as such notary as aforesaid, and the same is herewith attached to said stipulation and interrogatories.

In witness whereof I have hereunto set my hand and affixed my notarial seal, at the city of Boston aforesaid, this eleventh day of October, A. D. 1888.

[NOTARIAL SEAL] JOHN W. SHEPARD,
*Notary Public, Suffolk County, Massachusetts.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Company *vs.* City of Grand Haven *et al.* Depositions. Opened by order of court December 24, 1888. John McQuewan, deputy clerk.

142 United States Circuit Court for the Sixth Circuit and Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

Stipulated herein that the testimony to be taken in this cause on the 30th day of October, A. D. 1888, may be taken before Miss Nettie B. Nixon, notary public in and for Kent county, with the same force and effect and under the same conditions as the testimony hereinbefore taken before Charles H. Bender, notary public, and may be used on the hearing of the cause in the same manner and with the same force and effect as the testimony taken by the said Bender.

Oct. 30, 1888.

NORRIS & NORRIS,
*Sol'rs for Def't City of G. H.*
W. A. UNDERWOOD AND
ANDREW HOWELL,
*Sol'rs for Compl't.*
GEO. W. McBRIDE,
*Sol. for Grand Haven Water Works.*

OCTOBER 30TH, 1888.

*Testimony Taken Before me under and in Pursuance of the Foregoing Stipulation.*

Complainant appeared, by Andrew Howell, its solicitor.

Defendant The City of Grand Haven appeared, by Norris & Norris, its solicitors. No appearance for the other defendants.

The defendant The City of Grand Haven offered in evidence a certified copy of the proceedings of the common council of the city of Grand Haven pertaining to the Grand Haven water works and the contract of the city of Grand Haven therewith. The same was received and marked Exhibit "A."

143 AUGUSTUS M. COSGROVE, a witness produced, sworn, and examined on the part of the complainant, testified as follows:

Direct examination by Mr. HOWELL:

Q. Mr. Cosgrove, you have heretofore been sworn and testified as a witness in this cause at Grand Haven, before Mr. Bender, have you not?

A. Yes, sir.

Q. You are the superintendent of the Grand Haven water works?

A. Yes, sir.

Q. And have been for how long?

A. Three years last, I think, September.

Q. Since the city of Grand Haven has extended its water works, in the summer and fall of 1887, how many of the takers and consumers of water from the Grand Haven water works have left those works and changed for and are now taking water from the city water works?

A. Up to last Saturday I believe there were 46.

Q. The yearly rents paid by them to the Grand Haven water works for water amounted to what sum?

A. About $1,011 and some cents.

Q. You may state if that was the yearly revenue received from those consumers by the Grand Haven water works.

A. It was.

Q. If the city water works continue to supply water to those consumers and to keep them from taking the water supply from the Grand Haven water works, how much will it depreciate the value of the Grand Haven water works?

A. It will depreciate it at least half or more.

Q. Well, in dollars and cents, what would you say it would damage and depreciate the works in value?

A. I think it would depreciate the value of the works thirty-five to forty thousand dollars.

Q. What, in your judgment, would be the value of the Grand Haven water works system if the city of Grand Haven main-

144 tains its own city water works and continues to supply and does supply the inhabitants there*from* with water?

A. Well, they couldn't value it worth much more than so much old iron; than they could get for it for so much old iron.

Q. Well, state in dollars and cents, if you can, what would be the value of the works under such circumstances.

A. Well, we couldn't value them much more than twenty or twenty-five thousand dollars. Of course it is very hard to estimate any correct valuation under the circumstances.

Q. What have you to say as to whether the Grand Haven water works, since you have been superintendent, has or has not been able and willing and ready at all times to supply the city and inhabitants with water?

A. We have.

Q. Well, as to whether they have been able and willing and ready to supply all that was needed for fire and domestic and all other purposes required from those works.

A. They have been ready at all times to furnish the necessary supply for all purposes since I have been in charge of the works.

Q. State whether or not they have supplied all that has been called for or required of them since you have been superintendent.

A. They have supplied all that was called for.

Q. State whether or not filters or infilteration galleries are needed in connection with the Grand Haven water works.

A. I think they are not needed.

Q. Well, what have you to say as to whether there is any necessity or not for the building or extension of the city water works, the Grand Haven water works being constructed and running as it has been for the time which you were superintendent?

Mr. NORRIS: I object to that question, Mr. Howell, on the
145 ground that it is incompetent; that the witness is not the judge of the necessity of the city for water works.

A. I think there is no necessity for another water works there besides the Grand Haven water works.

Q. Are you well acquainted with the location of all pipes and mains and hydrants of the Grand Haven water works throughout the city?

A. Yes, sir.

Q. Are you acquainted with the buildings of the city and their location and their needs as to water supply?

A. Yes, sir.

Cross-examination by Mr. NORRIS:

Q. Mr. Cosgrove, do you consider Grand river water, taken from a point where the Grand Haven water works takes it, good water for domestic use without filtering?

A. With the exception of two or three months in the year I think it is.

Q. Now, when you say or state in your opinion that the competition of the city of Grand Haven's water works depreciates the value of the Grand Haven water works, do you mean that that competition depreciates the value of the plant of the Grand Haven

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Q. Mr. Cosgrove, do you consider Grand river water, taken from a point where the Grand Haven water works takes it, good water for domestic use without filtering?

A. With the exception of two or three months in the year I think it is.

Q. Now, when you say or state in your opinion that the competition of the city of Grand Haven's water works depreciates the value of the Grand Haven water works, do you mean that that competition depreciates the value of the plant of the Grand Haven

water works, or do you mean to be understood that the competition reduces the income of the Grand Haven water works and thereby makes it less able to pay an income upon the cost of its plant?

A. I consider it depreciates the valuation of the plant by the competition with the city works.

Q. Then, if I understand you, you regard, for instance, the pumping-house and pumping engines as absolutely worthless as a pumping-house and as pumping engines because of the competition of the city water plant?

A. Well, to a certain extent.

Q. Well, how does the competition of the city water works
146 make the actual value of the pumping engines and the pumping-house worthless?

A. It would be at a great expense to move them away under the conditions that the work is going on now; they would be of no valuation there, and in case they would have to be moved away from there it would depreciate the valuation at least one-half.

Q. Well, I am not assuming that they are going to be moved. I am assuming that the engines are to stay there.

A. They would be of no value where they are unless they were pumping water and kept in use.

Q. Then you regard the plant of the Grand Haven water works as being absolutely worthless because of the competition of the city water works?

A. Yes; I do.

Redirect examination by Mr. HOWELL:

Q. Have the Grand Haven water works any use for their pumping engines and pump-house and plant there unless they supply water from it to the city?

A. No; not that I know of.

Original notes signed by witness.

A. M. COSGROVE,

WESTERN DISTRICT OF MICHIGAN, } ss:
*Kent County,* }

I, Nettie B. Nixon, notary public in and for said county, do hereby certify that by virtue of the foregoing stipulation I took the evidence hereunto annexed; that the certified copy of the proceedings of the common council of the city of Grand Haven, which is hereto annexed, marked "Ex. A, N. B. N.," is the copy of the proceedings of the said common council hereinbefore referred to as received and marked Exhibit "A;" that the witness, Augustus M. Cosgrove, prior to giving his testimony, was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth; that he gave his evidence orally in reply to the questions of coun-
147 sel present, as hereinbefore noted; that said evidence was by

me taken, reduced to writing, and is herewith returned; all which I certify this 31st day of October, A. D. 1888.

NETTIE B. NIXON,
*Notary Public, Kent Co., Mich.*

Fees: 17 folios at $.20 per folio, $3.40.

April 12th, 1883. Page 448 of record.

"Resolved, That it is expedient to have constructed water works for the purpose of supplying the city of Grand Haven and the inhabitants thereof with water for fire, domestic, and other purposes, but that it is inexpedient for the city of Grand Haven, under the power granted in the charter, to build such works."

Sept. 25th, 1883. 38.

The mayor stated he had convened the council to consider certain propositions of the S. L. Wiley Construction Company of Massachusetts to erect water works in the city of Grand Haven.

On motion of Alderman Tate, it was resolved that the proposition made by Mr. Wiley for the Grand Haven Water Works Company be received, and that a committee of three, including the city attorney, be appointed to arrange in conjunction with the Grand Haven Water Works Company the details for a contract in general terms in conformity with the proposition presented.

The mayor appointed as such committee Ald. Tate and Boyden.

On motion of Ald. Tate, the committee was authorized, in case of the absence of the city attorney, to engage the services ef some other attorney if they deem it necessary.

Sept. 26th, 1883. 40.

Ald. Tate, as chairmain of the special committee on contract with the water works committee, reported progress and asked for further time wherein to make a report, which was granted.

148 Oct. 25th, 1883. 56.

Alderman Boyden, from the special committee on water works contract, presented a contract between the Grand Haven water works and the city of Grand Haven.

On motion of Alderman Hubbard, the contract was referred to a special committee — three, including the mayor, with instructions to report at the next meeting of the council.

The mayor appointed as such committee Ald. Hubbard and Boyden.

Oct. 26th, 1883. 58.

Ald. Hubbard, from the special committee on water works contract, reported that the committee had suggested several changes, which the company had concurred in, and presented the contract as amended. The roll being called, the contract was then approved

by the following vote: Ayes—Ald. Barnes, Blocker, Boyden, Brower, Gleason, Hubbard, and Sanford. Nays—none.

Ald. Boyden presented the following resolution:

Resolved, That the mayor and recorder be authorized and instructed to sign the contract prepared by the city attorney between the Grand Haven water works and the city of Grand Haven in regard to water works and the selling of the present water works and leasing the ground upon which the present pumping-house stands. Carried by the following vote: Ayes—Barnes, Blocker, Boyden, Brower, Gleason, Hubbard, and Sanford. Nays—none.

November 8th, 1883. 65.

The mayor stated that the contract between the city and the Grand Haven water works had been executed.

December 6th, 1883 75.

Alderman Sanford presented a communication from the
149 Grand Haven water works, asking to have certain changes made in their contract, and, on motion, the matter was referred the city attorney for his opinion.

December 6th, 1883. 77.

The city attorney reported that two of the proposed changes to the water works contract were quite unimportant, but that one of them ought to be well considered.

On motion of Ald. Gleason, the proposed alterations to the water works contract were referred to a special committee consisting of the mayor, Ald. Hubbard, and the city att'y.

Feb'y 7th, 1884. 99.

On motion of Ald. Hubbard, the subject of placing and locating hydrants was referred to the committee on fire department, with instructions to report at the next meeting of this council.

March 20th, 1884. 117.

On motion of Ald. Hubbard, the mayor was requested to notify the water works that the city is ready to execute the contract of sale of the pumping-house and machinery and desires the water works to take charge of the same.

May 15th, 1884. 163.

On motion of Ald. Emlaw, the water works were permitted to use the fire engine to pump out the ditch on Monroe street for the purpose of laying water pipe, provided it *occurs* no expense to the city.

June 19th, 1884. 183, '4.

A petition of the Grand Haven water works asking for an extension of time of two months, from July 1st, 1884, wherein to com-

plete the works, was read, and, on motion of Ald. Safford, the prayer of the petitioners was granted.

150 Mr. S. L. Wiley addressed the council, stating that the water works will pay whatever deficiency there may be in the running expenses of the present water works after deducting the water rents; also that when the new water works are completed they will take the old water works, according to agreement, and pay for them.

September 4th, 1884. 225.

The mayor stated that the time fixed in the contract and extended by the council for the completion of the water works had expired.

Sept. 4th, 1884. 228.

Ald. Barnes presented the following:

Whereas the Grand Haven water works, in putting in water works in the city of Grand Haven, has failed to complete said works in the time agreed upon in their contract with said city; and whereas there have been certain other violations of said contract on the part of said company:

Therefore be it resolved, That said contract be, and the same hereby is, canceled and declared forfeited.

The roll being called, the foregoing preamble and resolution were adopted by the following vote: Ayes—Ald. Barnes, Brower, Emlaw, Gleason, Kerr, and Safford. Nayes—none. Absent—Ald. Blocker and Sanford.

Sept. 25th, 1884. 235.

The city attorney recommended that a copy of the resolution of this council of Sept. 4th inst., declaring the contract with the Grand Haven water works forfeited, be served on the water works company.

Sept. 27th, 1884. 238.

The recorder stated that he had served a copy of the resolution declaring the water works contract forfeited on Mr. Cook,

151 agent of the water works.

Mr. S. L. Wiley addressed the council on the subject-matter of the water works, and stated, among other things, that the water works would fulfil its contract and promises in every respect, not alone to the letter, but also to the spirit of said contract.

October 2nd, 1884. 239 & '40.

The mayor stated that in a late consultation with Mr. S. L. Wiley he had stated that the company would carry out all their promises and agreements to and with the council; that they would take the old water works and pay for them, and that they would pay the difference between the receipts and the running expenses of the water works, and also recommended that a committee be designated to in-

quire into and report the running expense of the water works, as well as the receipts.

On motion of Ald. Gleason, the committee on accounts, with the recorder added thereto, was instructed to investigate and report the excess of the expenses over the receipts of the water works since the date when the water works company should have taken charge of the works, according to the contract.

October 16th, 1884. 243.

Ald. Blocker, from the special committee on water rates and water works, asked for further time wherein to report, which was granted.

November 6th, 1884. 251 & '2.

The recorder presented a communication from the Grand Haven water works, signed by T. A. Taylor, secretary, giving notice that the water works are completed; that they will charge the city rent for the hydrants from date, and asking to have a day appointed for the test of the same.

On motion of Ald. Sanford, the communication was referred
152 to the order of motions and resolutions.

On motion of Ald. Safford, the communication from the water works was received and ordered to be placed on file and the city attorney instructed to make a proper reply thereto on behalf of the city, reserving all the rights the city may have in the premises.

November 28th, 1884. 255.

Mr. George W. McBride addressed the council in behalf of the water works company, requesting that if any cause of dissatisfaction on the part of the council exists the same be stated and explained, so that the same, if possible, may be removed and an amicable unders-nding be arrived at. The mayor stated that the cause of dissatisfaction is that the company has not lived up to the conditions of the contract, whereupon Mr. McBride suggested that some time be appointed for a conference between the council and the water works, at the same time stating that he is not the authorized agent of the water works.

December 31st, 1884. 265.

The recorder presented the following communication:

GREENFIELD, MASS., *December 26th*, 1884.

To the mayor and common council of Grand Haven, Michigan:

GENTLEMEN: During the negotiations of the contract for the construction of the Grand Haven water works this company agreed verbally to purchase of the city the building and plant used by it for water works purposes when said proposed water works should be completed and ready for use. This company now has an oppor-

tunity to dispose of a part of said plant if it can have the same within three weeks, and this company respectfully informs the council if it will within that time, viz, three weeks, take such action as will enable this company to at once acquire title and pos-
153 session of said building and plant it will take the same and pay for it, according to the terms of said agreement, but if not—if the council shall fail to take such action within said time—this council is respectfully informed that this company will not take said plant or building or in any manner consider itself bound by said agreement.

THE S. L. WILEY CONSTRUCTION COMPANY,
By S. L. WILEY, *Pres't.*

On motion of Ald. Barnes, the communication was referred to the committee on fire department, together with the city attorney, to confer with the water works Co. and report.

A bill of the Grand Haven water works for two months' supply of water to January 1st, 1885, $7,000, was, on motion of Alderman Barnes, laid on the table by the following vote: Ayes—Ald. Barnes, Brower, Emlaw, and Kerr. Nays—none. Absent—Ald. Blocker, Safford, and Sanford.

January 15th, 1885. 270, '1.

Ald. Emlaw stated that a test of the new water works had been had this afternoon, and that the works had not been found satisfactory.

The Grand Haven water works presented the following:

To the common council of the city of Grand Haven, Michigan.

GENTLEMEN: The Grand Haven water works would respectfully ask your honorable body to declare by some corporate action if the works of said company are in any way unsatisfactory to the council; and, if so, to state the respects in which the same are so unsatisfactory.

Respectfully,
THE GRAND HAVEN WATER WORKS,
By GEO. VAN PATTEN, *Sup't.*

Also:

To the common council of Grand Haven.

GENTLEMEN: In view of the test of the works of the Grand Haven water works this day held, this company respectfully asks
154 this council for some action on the subject of the relations between this company and the city.

Dated January 15th, 1885.

THE GRAND HAVEN WATER WORKS,
By GEORGE VAN PATTEN, *Sup't.*

On motion of Ald. Brower, the communications were referred to the committee on fire department, together with the city att'y, to report at an adjourned meeting to be held on Saturday night next.

January 17th, 1885. 272, '3, '4.

Alderman Safford, from the committee on fire department, presented the following report:

To the common council of the city of Grand Haven.

GENTLEMEN: Your committee, to whom was referred the appended communications from the Grand Haven water works, would respectfully submit the following report:

That in their judgment the recent test of the water works demonstrated their inability to do and perform the conditions and several tests as embraced in the proposition submitted to the common council by the S. L. Wiley Construction Company Sept. 25th, 1883, of which the following are more particularly mentioned, viz:

1st. That the water supply is insufficient for the purposes in said proposition mentioned, in that the supply of good and sufficient water for fire, mechanical, manufacturing, and domestic purposes, and not deleterious to the health of those using it, became exhausted within twenty minutes from the time the test begun, whereby it became necessary to and connection was made with the river; wherefore the water then used was foul, dirty, impure, and entirely unfit for the purpose for which it was proposed it might be used.

155 2nd. That the supply of water by the test was conclusively shown not to be ample for all the purposes contemplated in said proposition.

3rd. That the test demonstrated that the wells established were not of sufficient capacity for the purpose specified and contemplated in said proposition.

4th. That the system of pumping engines was demonstrated by the test not to be capable and durable and properly adjusted and located as in said proposition provided and contemplated.

5th. That the test conclusively demonstrated that the pressure power of the pumping engines was not sufficient and equivalent to throw six one-inch streams of water to a perpendicular height of one hundred feet simultaneously.

6th. That said water works were in all essential respects inadequate to the wants and necessities of the people and city of Grand Haven as provided in said proposition and for the purposes for which they were contemplated.

MAJOR D. B. SAFFORD,
J. W. KERR, *Committee.*

On motion of Ald. Sanford the report was adopted and ordered to be placed on file by the following vote: Ayes—Ald. Barnes, Blocker, Brower, Kerr, Safford, and Sanford. Nays—none. Absent—Ald. Emlaw.

The water works presented a communication asking for a further test of the water works, and suggesting next Monday, January 19th, at ten o'clock in the forenoon as the time for such test.

On motion of Ald. Sanford the matter was referred to a special committee, consisting of Ald. Safford, Blocker, and the city attorney,

to report to the president if they deem it necessary to have a call of the council.

156 The water works presented a request that Alderman Blocker be required to make a report of the performance of the engines at water works and the pressure power during the test.

On motion of Ald. Brower the matter was referred to the special committee.

January 29th, 1885. 278.

Ald. Safford, of the special committee to whom was referred the communication from the water works asking for a further test, submitted a report deeming it inexpedient to call for a test at present on account of the severity of the weather.

On motion the report was received and ordered to be placed on file.

On motion of Ald. Blocker the chief engineer was instructed not to use the water from the Grand Haven water works.

January 31st, 1885. 280.

Mr. George Van Patten, sup't of the water works, presented a bill for hydrant rental to January 1st, 1885, $629, and asked leave to withdraw the former bill.

February 5th, 1885. 281.

On motion of Ald. Barnes a bill of the water works, $629, for hydrant rent to January 1st, 1885, was laid on the table.

April 16th, 1885. 316, 17.

Ald. Safford offered the following resolution:

Resolved, That the chief of the fire department be, and hereby is, instructed not to use or permit to be used any of the hydrants of the Grand Haven water works or to use or employ their water works in case of a fire in the city of Grand Haven.

Which resolution was adopted by a unanimous vote of the aldermen.

July 30th, 1885. 377.

157 The bill of the Grand Haven W. W. for the use of their hydrants was presented, and on motion of Ald. Golmyer was laid on the table.

June 17th, 1886. 16.

By Ald. Safford:

Resolved, That we cannot accept the proposition presented with the letter from Mr. Wiley of the 12th inst. Adopted unanimously.

July 22nd, 1886. 25.

On motion the communication of S. L. Wiley was laid over until the next meeting of this council.

August 5th, 1886. 27.

On motion of Ald. Bell the proposition of S. L. Wiley presented at the previous meeting of this council was laid on the table.

STATE OF MICHIGAN, } ss:
*County of Ottawa,* }

I, Wm. N. Angel, recorder of the city of Grand Haven, Michigan, do hereby certify that the within and foregoing is a true, correct, and compared copy by me of the records and proceedings of the common council of said city pertaining to the Grand Haven water works and the whole thereof as appears on the books of the records and proceedings of said common council.

Dated December 9th, 1887.

[Seal of the City of Grand Haven.]

WM. N. ANGEL, *Recorder.*

158 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

It is hereby stipulated that the testimony and depositions of James B. Murray, John G. Wilson, and James Campbell, witnesses on the part of the complainant in the above-entitled cause, may be taken under and by virtue of this stipulation and without any other warrant or authority, either from said court or otherwise, by and before George Mars, a notary public, residing at the city of McKeesport, in the State of Pennsylvania, upon the interrogatories and cross-interrogatories hereto annexed; that such testimony and depositions may be taken at such time and place at McKeesport aforesaid as shall suit the convenience of said notary and the said witnesses and without the presence or attendance of any of the parties in this cause or their solicitors or counsel.

That said witnesses may be sworn by said notary, and their testimony and depositions, when taken and reduced to writing by said notary or under his direction and signed by said witnesses and attached hereto and certified by said notary, may be forwarded by said notary by mail to Charles L. Fitch, clerk of the United States circuit court at Grand Rapids, Michigan, and that the testimony and depositions so taken and filed in this cause may be read and used in evidence upon the hearing of said cause with the same force and effect as if said testimony and depositions were taken
159 before an examiner of this court in the presence of the parties or their solicitors or counsel, but subject to objection as to

competency, relevancy, and materiality, said objections, if any, to be made at the hearing.

Dated Aug. 14, 1888.

W. A. UNDERWOOD & A. HOWELL,
*Solicitors for Complainant.*
NORRIS & NORRIS,
*Sol'rs for City of Grand Haven.*
GEO. W. McBRIDE,
*Sol. for Grand Haven Water Works.*

Interrogatories to be administered under and by authority of the annexed stipulation to James B. Murray, James Campbell, and John G. Wilson, all of McKeesport, in the State of Pennsylvania, witnesses on the part of the complainant in the cause named in the entitling of said stipulation.

First. What is your name, age, residence, and occupation?

Second. Have you any knowledge of The Boston Safe Deposit and Trust Company, the complainant in this cause; and, if so, what?

Third. Have you any knowledge of The Grand Haven Water Works, a corporation located at the city of Grand Haven, in the State of Michigan, one of the defendants in this cause; and, if so, how long have you known said corporation?

Have you any knowledge of or acquaintance with the other defendants in this cause?

Fourth. Are you acquainted with the National Tube Works Company, a company or corporation now or heretofore doing business at McKeesport, in the State of Pennsylvania?

If yea, how long have you been acquainted with said company? Have you had any business relations with or were you in the employ of said company in the years 1883 and 1884 or either of them; and, if so, in which of said years, and in what capacity?

160 Fifth. Do you know whether the said National Tube Works Company sold and delivered any iron pipe for use in the construction of water works to the defendant The Grand Haven Water Works? If yea, when and what amount of pipe? What was the size and diameter thereof? Was the same cast or wrought iron pipe, and when was the same shipped to said Grand Haven water works, and what was the quality and weight of said pipe as compared with pipe of standard weight? Was said pipe inspected and tested by hydrostatic pressure; and, if so, when and where, and to what pressure was it subjected, and what pressure did it bear to the square inch, and when and by whom was said pipe inspected and tested and shipped, and when, to whom, and where was it shipped?

W. A. UNDERWOOD & A. HOWELL,
*Sol'rs for Compl't.*

*Cross-Interrogatory.*

Q. What is the weight of standard pipe referred to in question fifth, direct interrogatory?

STATE OF PENNSYLVANIA, }
*Allegheny County.* }

I, George Mars, the notary public named in the foregoing and annexed stipulation, residing in the city of McKeesport, in the county of Allegheny and State of Pennsylvania, and being a notary public in and for said county, do hereby certify that upon the coming to me of the annexed stipulation and interrogatories and the cross-interrogatory thereto attached I did, on the 10th day of October, A. D. 1888, cause the witnesses, James B. Murray, James Campbell, and John G. Wilson, named in said stipulation to come before in said borough of McKeesport for the purpose of giv-
161 ing their testimony and depositions in pursuance of such stipulation, and thereupon I, as such notary, publicly administered an oath to each of said witnesses that the answers given by him to the said annexed interrogatories and the cross-interrogatory proposed to him should be the truth, the whole truth, and nothing but the truth, and I did then and there proceed to the examination of said witnesses upon said annexed interrogatories and cross-interrogatory, and such examination and deposition of each of said witnesses was then reduced to writing by me and subscribed by him, and each sheet of said deposition is also subscribed by me as such notary as aforesaid, and the same is herewith attached to said stipulation and interrogatory.

And I further certify that at the taking of said examination and depositions I was attended by no one as counsel for said complainant, but no one appeared before me on behalf of any of said defendants.

In witness whereof I have hereunto set my
[NOTARIAL SEAL.] hand and affixed my notarial seal, at the borough of McKeesport aforesaid, this 12th day of October, A. D. 1888.

GEORGE MARS,
*Notary Public.*

UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant, }
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants. }

JAMES B. MURRAY, being called and duly sworn, deposeth and saith:

First interrogatory. What is your name, age, residence, and occupation?

Answer to first interrogatory. Name, James B. Murray; age,
162 forty-eight years; residence, McKeesport, Alleghany county,

Pennsylvania; occupation, head of order department for National Tube Works Company, at their McKeesport offices.

Second interrogatory. Have you any knowledge of The Boston Safe Deposit and Trust Company, the complainant in this cause; and, if so, what?

Answer to second interrogatory. I have no knowledge of the Boston Safe Deposit Company.

Third interrogatory. Have you any knowledge of The Grand Haven Water Works, a corporation located at the city of Grand Haven, in the State of Michigan, one of the defendants in this cause; and, if so, how long have you known said corporation? Have you any knowledge of or acquaintance with the other defendants in this cause?

Answer to third interrogatory. I have no personal knowledge or acquaintance with the defendants in this cause.

Fourth interrogatory. Are you acquainted with the National Tube Works Company, a company or corporation now or heretofore doing business at McKeesport, in the State of Pennsylvania; if yea, how long have you been acquainted with said company? Have you had any business relations with or were you in the employ of said company in the years 1883 and 1884 or either of them; and, if so, in which of said years and in what capacity?

Answer to fourth interrogatory. Yes; for seventeen years, and I was in the employ of said company during the years 1883 and 1884, in the same capacity I am now, head of order department.

Fifth interrogatory. Do you know whether the said National Tube Works Company sold and delivered any iron pipe for use in the construction of water works to the defendant The Grand Haven Water Works; if yea, when and what amount of pipe?
163 What was the size and diameter thereof? Was the same cast or wrought iron pipe, and when was the same shipped to said Grand Haven water works, and what was the quality and weight of said pipe as compared with pipe of standard weight? Was said pipe inspected and tested by hydrostatic pressure; and, if so, when and where and to what pressure was it subjected, and what pressure did it bear to the square inch, and when and by whom was said pipe inspected and tested and shipped, and when, to whom, and where was it shipped?

Answer to fifth interrogatory. I know that the said National Tube Works Company did sell and deliver wrought-iron pipe for use in constructing water works to the defendant The Grand Haven Water Works. We shipped on December 14th and 22nd, 1883, 5,283 feet of 6-inch Converse patent lock-joint pipe and 500 feet of 4-inch; we shipped 900 feet of 6-inch August, 8th, 1884, and 720 feet of four-inch June 12th, 1884. It was wrought-iron pipe, known as Converse patent lock-joint pipe. It was of the usual quality made for water works and of the standard weight for Converse patent lock joint pipe. Said pipe was inspected and tested at the National Tube Works Company's works at McKeesport, Pennsylvania, under the supervision of James Campbell, foreman of the finishing department. I have no actual knowledge of the test, it

being made under the supervision of Mr. Campbell. It was inspected and tested under his direction and shipped under the supervision of John G. Wilson, chief shipper.

Cross-interrogatory. What is the weight of standard pipe referred to in question fifth, direct interrogatory?

Answer to cross-interrogatory. It is the standard of Converse patent lock-joint pipe—6-inch, 8¾ pounds to the lineal foot,
164 and 4-inch, 5¼ pounds to the lineal foot.

JAMES B. MURRAY.

Sworn and subscribed before me this 12th day of October, A. D. 1888.

GEORGE MARS,
*Notary Public.* [NOTARIAL SEAL.]

JAMES CAMPBELL, being called and duly sworn, deposeth and saith:

First interrogatory. What is your name, age, residence, and occupation?

Answer to first interrogatory. Name, James Campbell; age, forty-nine years; residence, McKeesport, Pennsylvania; occupation, foreman of the finishing department of the National Tube Works Company at their McKeesport works.

Second interrogatory. Have you any knowledge of The Boston Safe Deposit and Trust Company, the complainant in this cause; and, if so, what?

Answer to second interrogatory. I have no knowledge of them.

Third interrogatory. Have you any knowledge of The Grand Haven Water Works, a corporation located at the city of Grand Haven, in the State of Michigan, one of the defendants in this cause; and, if so, how long have you know- said corporation? Have you any knowledge of or acquaintance with the other defendants in this cause?

Answer to third interrogatory. I have only heard of the Grand Haven Water Works Company. I knew that we were getting out pipe for their system at Grand Haven, Michigan; heard of them in 1883 and 1884 and occasionally since.

Fourth interrogatory. Are you acquainted with the National Tube Works Company, a company or corporation now or heretofore doing business at McKeesport, in the State of Pennsylvania; if yea, how long have you been acquainted with said com-
165 pany? Have you had any business relations with or were you in the employ of said company in the years 1883 and 1884 or either of them; and, if so, in which of said years and in what capacity?

Answer to fourth interrogatory. Yes; I have been in the employ the National Tube Works Company for nearly seventeen years, in the capacity of foreman of their finishing department since 1876. I was in their employ during both the years 1883 and 1884.

Fifth interrogatory. Do you know whether the said National Tube Works Company sold and delivered any iron pipe for use in

the construction of water works to the defendant The Grand Haven Water Works? If yea, when and what amount of pipe? What was the size and diameter thereof? Was the same cast or wrought iron pipe, and when was the same shipped to the said Grand Haven water works, and what was the quality and weight of said pipe as compared with pipe of standard weight? Was said pipe inspected by hydrostatic pressure; and, if so, when and where and to what pressure was it subjected, and what pressure did it bear to the square inch, and when and by whom was said pipe inspected and tested and shipped, and when, to whom, and where was it shipped?

Answer to fifth interrogatory. I know that the said National Tube Works Company did sell and deliver wrought-iron pipe for use in constructing water works for the defendant The Grand Haven Water Works Company. To the best of my knowledge we shipped, on December 14th and 22nd, 1883, 5,283 feet of 6-inch Converse patent lock-joint pipe and 500 feet of four-inch; 900 feet of 6-inch on August 8th, 1884, and 720 feet of four-inch on June 12th, 1884. The pipe was wrought iron and was what is known as our Converse patent lock-joint pipe. The quality and weight of said pipe
166 was the same as our regular Converse patent lock-joint pipe for water works purposes, and was Converse patent lock-joint pipe, standard weight. It was all inspected and tested by hydrostatic pressure here in the works at McKeesport, where it was made. It was all tested and subjected to an hydrostatic pressure of not less than 500 pounds to the square inch, and it all stood a pressure of 500 pounds and upwards to the square inch. This pipe was all inspected and tested under my personal supervision. John G. Wilson, chief shipper, can answer as to the shipping.

Cross-interrogatory. What is the weight of standard pipe referred to in question fifth, direct interrogatory?

Answer to cross-interrogatory. 6-in., $8\frac{3}{4}$ pounds to the lineal foot, and 4-inch, $5\frac{1}{4}$ pounds to the lineal foot, the standard for Converse patent lock-joint pipe.

JAMES CAMPBELL.

Sworn and subscribed to before me this 12th day of October, A. D. 1888.

GEORGE MARS, [NOTARIAL SEAL.]
*Notary Public.*

JOHN G. WILSON, being called and duly sworn, deposeth and saith:

First interrogatory. What is your name, age, residence, and occupation?

Answer to first interrogatory. Name, John G. Wilson; age, thirty-one years; residence, McKeesport, Pennsylvania; occupation, chief of the shipping department at the McKeesport works of National Tube Works Company.

Second interrogatory. Have you any knowledge of The Boston Safe Deposit and Trust Company, the complainant in this cause; and, if so, what?

Answer to second interrogatory. I have no knowledge of them.

Third interrogatory. Have you any knowledge of The Grand Haven water works, a corporation located at the city of
167 Grand Haven, in the State of Michigan, one of the defendants in this cause; and, if so, how long have you known said corporation? Have you any knowledge of or acquaintance with the other defendants in this cause?

Answer to third interrogatory. I have heard of the Grand Haven water works and know that we shipped Converse patent lock joint pipe to Grand Haven, Michigan, for water-works purposes; have known of them since 1883. I have no personal knowledge of the other defendants.

Fourth interrogatory. Are you acquainted with the National Tube Works Company, a company or corporation now or hereafter doing business at McKeesport, in the State of Pennsylvania; if yea, how long have you been adquainted with said company? Have you had any business relations with or were you in the employ of said company in the years 1883 and 1884, or either of them; and, if so, in which of said years and in what capacity?

Answer to fourth interrogatory. Yes; I have been acquainted with said company since 1875. During the years 1883 and 1884 I was employed by the National Tube Works Company at its McKeesport works in the capacity of chief of the shipping department, which position I now hold.

Fifth interrogatory. Do you know whether the said National Tube Works Company sold and delived any iron pipe for use in the construction of water works to the defendant The Grand Haven Water Works; if yea, when and what amount of pipe? What was the size and diameter thereof? Was the same cast or wrought-iron pipe, and when was the same shipped to said Grand Haven water works, and what was the quality and weight of said pipe as compared with pipe of standard weight? Was said pipe inspected and tested by hydrostatic pressure; and, if so, when and where and to what pressure was it subjected, and what pressure did it bear to the
168 square inch, and when and by whom was said pipe inspected and tested and shipped, and when, to whom, and where was it shipped?

Answer to fifth interrogatory. I know that the said National Tube Works Company did sell and deliver wrought-iron pipe for use in constructing water works to the defendant The Grand Haven Water Works. Said pipe was sold here at McKeesport to said Grand Haven water works and delivered and shipped to the said company on board of P. R. R. car 14658, containing 152 pieces of 6-inch and 28 pieces of 4-inch Converse patent lock-joint pipe, shipped December 22nd, 1883; P. R. R. car 20174, containing 178 pieces of 6-inch Converse patent lock-joint pipe, shipped December 14th, 1883; P. R. R. car 20165, containing 60 pieces of 4-in. Converse patent lock-joint pipe, shipped June 12th, 1884, and N. C. car 9848, containing 56 pieces of 6-inch Converse patent lock-joint pipe, shipped August 8th, 1884, aggregating 6,183 feet of 6-inch and 1,221 feet of 4-inch Converse joint pipe. This pipe was for the Grand Haven water works, Grand Haven, Michigan, marked in care of the consignees,

the S. L. Wiley Construction Company, at Grand Haven, Mich. The weight and diameter of the pipes was as follows: 6-inch outside diameter and 4-inch outside diameter Converse patent lock-joint pipe of the standard Converse patent lock-joint pipe, weights per foot respectively. Respecting the inspection and testing, Foreman James Campbell had personal supervision of that part of the work. I personally superintended the shipment of all of this pipe for use in the construction of the Grand Haven water works, at Grand Haven, Michigan.

Cross-interrogatory. What is the weight of standard pipe referred to in question fifth, direct interrogatory?

Answer to cross-interrogatory. 6 in., 8¾ pounds to the
169 lineal foot, and 4 in., 5¼ pounds to the lineal foot, the standard for Converse patent lock-joint pipe.

JOHN G. WILSON.

Sworn and subscribed before me this 12th day of October, A. D. 1888.

[NOTARIAL SEAL.] GEORGE MARS,
*Notary Public.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Co. *vs.* City of Grand Haven *et al.* Deposition. Opened by order of court December 24, 1888. John McQuewan, deputy clerk.

170 UNITED STATES OF AMERICA:

The Circuit Court *for* the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

It is hereby stipulated that the testimony and depositions of Charles Parrott and Edward Matthews, witnesses on the part of the complainant in the above-entitled cause, may be taken under and by virtue of this stipulation and without any other warrant or authority, either from said court or otherwise, by and before Oscar S. Lear, a notary public residing at the city of Columbus, in the State of Ohio, upon the interrogatories and cross-interrogatories hereto annexed.

That such testimony and depositions may be taken at such time and place at Columbus aforesaid as shall suit the convenience of the said notary and the said witnesses and without the presence or attendance of any of the parties in this cause or their solicitors or counsel.

That said witnesses may be sworn by said notary, and their testimony and depositions, when taken and reduced to writing by said

notary or under his direction and signed by said witnesses and attached hereto and certified by said notary, may be forwarded by said notary, by mail, to Charles L. Fitch, clerk of the United States circuit court, at Grand Rapids, Michigan, and that the testimony and depositions so taken and filed in this cause may be read and used in evidence upon the hearing of said cause with the same force and effect as if said testimony and depositions were taken before an examiner of this court in the presence of the parties
171 or their solicitors or counsel, but subject to objection as to competency, relevancy, and materiality, said objections, if any, to be made at the hearing.

Dated July 10, 1888.

W. A. UNDERWOOD & A. HOWELL,
*Solicitors for Complainant.*
NORRIS & NORRIS,
*Sol'rs for City of Grand Haven.*
GEO. W. McBRIDE,
*Sol. for Grand Haven Water Works, Defendant.*

Interrogatories to be administered under and by authority of the annexed stipulation to Charles Parrott and Edward Matthews, witnesses on the part of the complainant in the cause named in the entitling of said stipulation.

First. What is your name, age, residence, and occupation?

Second. Have you any knowledge of The Boston Safe Deposit and Trust Company, the complainant in this cause; and, if so, what?

Third. Have you any knowledge of The Grand Haven Water Works, a corporation located at the city of Grand Haven, in the State of Michigan, one of the defendants in this cause; and, if so, how long have you known said corporation? Have you any knowledge of or acquaintance with the other defendants in this cause?

Fourth. Are you acquainted with the Ohio Pipe Company, a company now or heretofore doing business at Columbus, in the State of Ohio? If yea, how long have you been acquainted with said company? Have you had any business relations with said company? Have you ever been in the employ of said company? If yea, when, during what time, and in what capacity?

Fifth. Do you know whether the said Ohio Pipe Company ever at any time sold and delivered any cast-iron pipe for use in
172 the construction of Water Works to the said defendant, "The Grand Haven Water Works"? If yea, when and what amount of pipe, what was the size and diameter thereof, and when was the same shipped to said Grand Haven water works, and what was the weight and quality of said pipe as compared with pipe of standard weight? Was said pipe inspected and tested by hydrostatic or hydraulic pressure; and, if so, to what test and pressure was it subjected, and what pressure did it bear to the square inch, and when

and where was all of it so tested, and when and by whom was said pipe inspected, tested, and shipped, and to whom was it shipped?

W. A. UNDERWOOD & A. HOWELL,
*Solicitors and of Counsel for Complainant.*

UNITED STATES OF AMERICA:

Circuit Court *for* the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

*Cross-Interrogatories.*

1. What is a pipe of standard weight for water-works use?
2. What is the lowest test pipe ordinarily used for water-works purposes?

STATE OF OHIO, *Franklin County,* } *ss:*

I, Oscar S. Lear, the notary public named in the foregoing and annexed stipulation, residing in the city of Columbus, in the county of Franklin and State of Ohio, do hereby certify that upon the coming to me of the annexed stipulation and interrogatories
173 and the cross-interrogatories thereto attached I did, on the eighth day of October, A. D. 1888, cause the witnesses, Charles Parrott and Edward Matthews, named in said stipulation to come before me, at my office, in said city of Columbus, for the purpose of giving their testimony and depositions in pursuance of said stipulation, and thereupon I, as such notary, publicly administered an oath to each of the said witnesses that the answers given by him to the said annexed interrogatories and cross-interrogatories proposed to him should be the truth, the whole truth, and nothing but the truth, and I did then and there proceed to the examination of said witnesses upon said annexed interrogatories and cross-interrogatories, and such examination and deposition of each of said witnesses was then reduced to writing by me and subscribed by him, and each sheet of said deposition is also subscribed by me as such notary as aforesaid, and the same is herewith attached to said stipulation and interrogatories.

And I further certify that at the taking of said examination and depositions I was not attended by any one as counsel for said complainant and no one appeared before me on behalf of any of said defendants.

In witness whereof I have hereunto set my hand and affixed my notarial seal, at the city of Columbus aforesaid, this eighth day of October, A. D. 1888.

[NOTARIAL SEAL.]

OSCAR S. LEAR,
*Notary Public.*

*Testimony of Charles Parrott.*

174 To the first direct interrogatory the witness says: My name is Charles Parrott; age, 54; residence, Columbus, Ohio, and occupation, president of the Ohio Pipe Company.

To the second direct interrogatory the witness says: I have no knowledge of the Boston Safe Deposit and Trust Company.

To the third direct interrogatory the witness says: I have no knowledge of the Grand Haven water works except that we shipped some pipe to the S. L. Wiley Construction Company at Grand Haven, Michigan, for the construction of the Grand Haven water works.

I have no knowledge of or acquaintance with the other defendants in this cause.

To the fourth direct interrogatory the witness says: I am acquainted with the Ohio Pipe Company and have been ever since its organization. I am and have been its president ever since its organization, in 1882, and also its treasurer.

To the fifth direct interrogatory the witness says: I know that the Ohio Pipe Company did sell and deliver cast-iron pipe for use in constructing water works at Grand Haven, Michigan. Said pipe was sold here at Columbus to be delivered at Grand Haven, Michigan, to the S. L. Wiley Construction Company of Greenfield, Massachusetts, for use in constructing water works at Grand Haven, Michigan, and was delivered and shipped to said company on board cars and directed to the S. L. Wiley Construction Company, Grand Haven, Michigan.

The dates of such shipments were at various times, beginning December 4th, 1883, and continuing during February, March, May, and August, 1884, the last shipment being August 23d, 1884.

The amount, weight, size, and diameter of pipe so delivered and shipped were as follows:

| | | |
|---|---|---|
| 4″ pipe | 59 tons | 914 lbs. |
| 6″ pipe | 320 " | 1,552 " |
| 175 8″ " | 89 " | 1,397 " |
| 10″ " | 98 " | 1,658 " |
| 12″ pipe | 72 " | 834 " |
| Total pipe | 541 " | 355 " |
| " specials | 12 " | 1,662 " |
| Grand total | 554 " | 17 " |

Said pipe was all of standard weight and good quality. Standard weight varies in different establishments. There is no definite weight which can be put down as standard-weight pipe, but any pipe is supposed to be of standard weight which is sufficiently strong to stand a hydraulic or hydrostatic pressure of 300 pounds to the square inch. Our instructions are to have all pipe tested and subjected to such pressure and not to permit any pipe to go out unless it has stood such pressure. This pipe was inspected and

tested by Edward Mathews at the time it was made, which was just prior to the time it was shipped, some of which I saw inspected and tested, but not enough to give testimony as to all; presume, however, that our instructions to let no pipe be shipped unless it has stood such pressure were carried out.

The pipe mentioned above in tons which we shipped was 154 pieces of "specials," 1,205 p'c's 6-inch; 299 p'c's 8-inch; 307 p'c's 10-inch; 138 p'c's 12-inch, and 466 p'c's of 4-inch.

The 6-inch pipe averaged 367½ lb-. per piece; the 8-inch, 600 lbs. per piece; the 10-inch, 644 lbs. per piece; the 12-inch, 1,050 lbs. per piece, and the 4-inch, 255 lbs. per piece, each piece being 12 feet long.

*Answers to Cross-Interrogatories.*

To the first cross-interrogatory the witness says: I have already answered the question of what a pipe of standard weight for water-works use is in my direct examination.

176 To the second cross-interrogatory the witness says: I am unable to state what the lowest test pipe ordinarily used for water-works purposes is, as there is great variation in the weight and thickness of pipes used by different cities and water-works contractors.

CHAS. PARROTT.

*Testimony of Edward Mathews.*

To the first direct interrogatory the witness says: My name is Edward Mathews; age, 40; residence, Columbus, Ohio, and occupation, inspector Ohio Pipe Company.

To the second direct interrogatory the witness says: I have no knowledge of the Boston Safe Deposit and Trust Company.

To the third direct-interrogatory the witness says: I have no knowledge of the Grand Haven water works, except that some pipe were shipped to the S. L. Wiley Construction Company at Grand Haven, Michigan, that I hear was for the construction of the Grand Haven water works. I have no knowledge of or acquaintance with the other defendants in this cause.

To the fourth direct interrogatory the witness says: I am acquainted with the Ohio Pipe Company and have been employed by them about six years. I have been inspecting and shipping pipe during all that time.

To the fifth direct interrogatory the witness says: All I know is that we shipped pipe to Grand Haven, Michigan, which I understood was for the water works which Mr. Wiley was constructing. Shipments commenced late in 1883 and continued during part of the year 1884.

177 The amount, weight, size, and diameter of pipe so delivered and shipped were as follows:

| | | | |
|---|---|---|---|
| 466 pieces 4″ pipe | 59 tons | 914 lbs. |
| 1205 " 6″ " | 220 " | 1,552 " |
| 299 p'c's 8″ " | 89 " | 1,397 " |
| 307 " 10″ " | 98 " | 1,658 " |
| 138 " 12″ " | 72 " | 834 " |
| Total pipe | 541 " | 355 " |
| 154 "specials" | 12 " | 1,662 " |
| Grand total | 554 " | 17 " |

These pieces were each 12 feet long. All of them were tested by me by hydraulic pressure here in the works. It was inspected here by myself just before it was shipped. It was shipped to the S. L. Wiley Construction Company at Grand Haven, Michigan. It was all good pipe, the best that we make, and was subjected to a pressure of 300 pounds to the square inch.

*Answers to Cross-Interrogatories.*

To the first cross-interrogatory the witness says: The standard weight is so different in different establishments that I cannot say exactly.

To the second cross-interrogatory the witness says: A 12-inch pipe should stand, say, a thousand pounds, from nine hundred to a thousand pounds. A 10-inch pipe will take 700 pounds; you can get down as low as 600 pounds, provided the pipe is uniform. An 8-inch pipe should stand 500 pounds. A 6-inch pipe will take from 350 to 380 pounds. A 4-inch pipe will take 250 to 290 pounds. The weights I have given is as near as I can get to it, and the pipe will stand this pressure all right if the pipe is properly made.

EDWARD MATHEWS.

178 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

It is hereby stipulated that the testimony and depositions of George Goodwin, of the city of Troy, in the State of New York, a witness on the part of the complainant in the above-entitled cause, may be taken under and by virtue of this stipulation, and without any other warrant or authority either from said court or otherwise, by and before William W. Rousseau, a notary public, residing at the city of Troy, in the State of New York, upon the interrogatories hereto annexed.

That such testimony and deposition may be taken at such time and place at Troy aforesaid as shall suit the convenience of said notary and the said witness and without the presence or attendance of any of the parties in this cause or their solicitors or counsel.

That said witness may be sworn by said notary, and his testimony and deposition when taken and reduced to writing by said notary or under his direction and signed by said witness and attached hereto and certified by said notary may be forwarded by said notary by mail to Charles L. Fitch, clerk of the United States circuit court, at Grand Rapids, Michigan, and that the testimony and deposition so taken and filed in this cause may be read and used in evidence upon the hearing of said cause with the same force and effect as if said testimony and deposition were taken before an examiner of this court in the presence of the parties or their
179 solicitors or counsel, but subject to objection as to competency, relevancy, and materiality; said objections, if any, to be made at the hearing.

Dated Oct. 8, 1888.

W. A. UNDERWOOD & A. HOWELL,
*Solicitors for Complainant.*

NORRIS & NORRIS,
*Sol'rs for Def't The City of Grand Haven.*

Interrogatories to be administered under and by authority of the annexed stipulation to George Goodwin, a witness on the part of the complainant, in the cause pending in the circuit court of the United States for the western district of Michigan, in equity, wherein The Boston Safe Deposit and Trust Company is complainant and The City of Grand Haven, Alvah L. Holmes, and The Grand Haven Water Works are defendants:

First. What is your name, age, residence, and occupation?

Second. Have you any knowledge of the said Boston Safe Deposit and Trust Company?

Third. Have you any knowledge of The Grand Haven Water Works, a corporation located at the city of Grand Haven, in the State of Michigan, one of the defendants in this cause? Have you any knowledge or acquaintance with the other defendants in this cause?

Fourth. Are you acquainted with the Ludlow Valve Manufacturing Company of Troy, New York; if yea, how long have you been acquainted with said company, and have you ever been in the employ of said company; and, if so, during what time, and how long, and in what capacity?

Fifth. Do you know whether the Ludlow Valve Manufacturing Company at any time in the years 1883 or 1884 sold any hydrants to said Grand Haven water works, or to the S. L. Wiley Construction Company, to be shipped to Grand Haven, Michigan, to
180 be used in the construction of water works at that place; if yea, when, and how many hydrants were so sold and shipped to Grand Haven? Were they double or single nozzled, and whether

of modern pattern? Were they before shipped tested as to the amount of hydraulic pressure they would sustain, and can you say what amount of pressure they did sustain, or were capable of sustaining? Were they of cast iron?

W. A. UNDERWOOD & A. HOWELL,
*Sol'rs for Compl't.*

UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Sixth Circuit and Southern Division of the Western District of Michigan. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

GEORGE GOODWIN, being duly sworn, deposes and says that the answers to the stipulated questions hereto appended in the above-named action, wherein The Boston Safe Deposit Company is complainant and The City of Grand Haven *et al.* are defendants, are the truth, the whole truth, and nothing but the truth.

First question. "What is your name, age, residence, and occupation?"

Answer. George Goodwin; 38 years of age; # 54 Second Ave., Lansingburgh; machinist.

Second question. "Have you any knowledge of the said Boston Safe Deposit and Trust Co.?"

Answer. Have not.

181 Third question. "Have you any knowledge of The Grand Haven Water Works, a corporation located at the city of Grand Haven in the State of Michigan, one of the defendants in this cause? Have you any knowledge or acquaintance with the other defendants in this cause?"

Answer. Have not with any or either of the defendants.

Fourth question. "Are you acquainted with the Ludlow Valve Manufacturing Company of Troy? If yea, how long have you been acquainted with said company and have you ever been in the employ of said company; and if so, during what time and how long and in what capacity?"

Answer. Yes; have been acquainted with the Ludlow Valve Co. of Troy since 1873, and have been in their employ *continuously since that time, commencing as a journeyman until about six years ago, when I became foreman of the works, in which situation I have remained and am still the foreman of the works.

Fifth question. "Do you know whether the Ludlow Valve Manufacturing — at any time in the years 1883 or 1884 sold any hydrants to said Grand Haven water works or to the S. L. Wiley Construction

*"Continuously" interlined before execution. W. W. R.

Company to be shipped to Grand Haven or to be used in the construction of water works at *that* places? If yea, when, and how many hydrants were so sold and shipped to Grand Haven? Were they double or single nozzled, and whether of modern pattern? Were they, before shipped, tested to the amount of hydraulic pressure they would sustain; and can you say what amount of pressure they did sustain or were capable of sustaining? Were they of cast iron?"

Answer. I know that in 1883 the Ludlow Valve Company sold to the Wiley Construction Company sixty hydrants, which were shipped to Grand Haven in the spring of 1884, 25 of them
182 being shipped March 31st, 1884, and the balance not long afterwards. The date of the order was Nov. 2d, 1883. The hydrants were all doubled-nozzled, of our latest pattern. In March, 1883, we changed our patterns, making the hydrants heavier, and those sent to Grand Haven were of this last pattern. All hydrants are tested before leaving the works. There never was one sent out without being tested. Before our patter-s were changed, 1883, when the hydrants were lighter, we used to test them to 300 pounds pressure, but on account of the difficulty in making the tests, after testing the new ones for a couple of months at 300 pounds, we reduced the test to 250 pounds. I never saw one of our hydrants bursted unless there was a crack in the iron, and think they would stand a test of 350 pounds to 400 pounds pressure. I believe the hydrants shipped to Grand Haven as above mentioned would stand such a test. They were made of cast and wrought iron and brass.

In witness whereof I have this day placed my hand and seal. Troy, October 16, 1888.

GEORGE GOODWIN. [SEAL.]

Subscribed and sworn to before me the 16th day of October, 1888.

WM. W. ROUSSEAU,
*Notary Public.*

STATE OF NEW YORK, }
—— *County*, } *ss:*

I, William W. Rousseau, the notary public named in the foregoing and annexed stipulation, residing in the city of Troy, in the county of Rensselaer and State of New York, and being a notary public in and for said county, do hereby certify that upon the coming to me of the annexed stipulation and interrogatories thereto attached I did, on the sixteenth day of October, 1888, cause the witness, George Goodwin, named in said stipulation to come before
183 me, at the office of the Ludlow Valve M'f'g Co., in said city of Troy, for the purpose of giving his testimony and deposition in pursuance of said stipulation; and thereupon I, as such notary, publicly administered an oath to the said witness that the answers given by him to the said annexed interrogatories proposed to him should be the truth, the whole truth, and nothing but the truth; and I did then and there proceed to the examination of said witness upon said annexed interrogatories, and such examination

and deposition of the said witness was then reduced to writing by me and subscribed by him, and each sheet of said deposition is also subscribed by me as such notary as aforesaid, and the same is herewith attached to said stipulation and interrogatories.

In witness whereof I have hereunto set my hand and affixed my notarial seal, at the city of Troy aforesaid, this sixteenth day of October, A. D. 1888.

[NOTARIAL SEAL] WM. W. ROUSSEAU,
*Notary Public, Rensselaer County, New York.*

STATE OF NEW YORK,
*City of Troy, Rensselaer County Clerk's Office,* } ss:

I, Daniel E. Conway, clerk of said county and also clerk of the supreme and county courts, being courts of record held therein, do hereby certify that Wm. W. Rousseau, whose name is subscribed to the annexed jurat, was at the time of signing the same a notary public in and for said county, duly commissioned and sworn and authorized to administer oaths; that I am well acquainted with the handwriting of the said notary and verily believe that the signature to the said jurat is genuine.

In testimony whereof I have hereunto set my hand and affixed the seal of said county this 17th day of October, A. D. 1888.

[Seal of Rensselaer County, New York.]

D. E. CONWAY, *Clerk.*

184 UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Western District, Southern Division of Michigan. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Compl't,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and GRAND HAVEN WATER WORKS, Def'ts.

In this cause it is stipulated that the testimony of Clarence H. Venner, of Boston, Mass., a witness for the complainant, may be taken before Charles E. Soule, a notary public for the county of Ottawa, Michigan, at his office, in the city of Grand Haven, Michigan, on Tuesday, the 14th day of August, A. D. 1888, at 2 o'clock p. m., upon oral interrogatories, with the same force and effect as if regularly taken before an examiner regularly appointed by said court, and that the same when so taken and filed may be read in evidence on the hearing of said cause with the same force and effect and subject to the same legal objections as if taken before such examiner.

Dated Aug. 14, 1888.

W. A. UNDERWOOD,
A. HOWELL,
*Solicitors for Compl't.*
NORRIS & NORRIS,
*Sol'rs for Defendant The City of Grand Haven.*

The Circuit Court of the United States for the Sixth Circuit and the Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSITE AND TRUST COMPANY, Complainants,
*against*
THE CITY OF GRAND HAVEN, ALVA HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

Deposition of Clarence H. Venner, a witness produced, sworn, and examined before me on the 14th day of August, A. D. 1888,
185 in pursuance of a stipulation hereto annexed.

The complainants appeared by W. A. Underwood, their counsel, and The City of Grand Haven, one of the defendants, by Mark Norris, of counsel for said city.

Questions by Mr. UNDERWOOD:

Q. State your name, residence, and occupation.
A. Clarence H. Venner; Boston; banker.
Q. Of what firm or house are you a member?
A. C. H. Venner & Co.
Q. How long have you been connected with that house?
A. Since 1881.
Q. What, if any, business does that house do in dealing in securities?
A. We buy and sell State, municipal, railroad, and other corporation bonds and investment securities generally.
Q. How long have you been engaged in so doing?
A. Fifteen or sixteen years.
Q. Do you know a corporation called the Grand Haven water works?
A. I do.
Q. Located at Grand Haven, Michigan?
A. Yes, sir.
Q. State if you know anything about the Grand Haven water works in the fall of 1883 or early part of 1884 making and offering for sale an issue of $70,000.00 of first-mortgage bonds.
A. I do.
Q. Do you know who, if any one, purchased said bonds?
A. My firm did.
Q. When?
A. I can't state the exact date, but my recollection is about January first, 1884.
Q. At what price?
A. Par, less a banker's commission.
Q. With whom did you negotiate the purchase?
A. Mr. S. L. Wiley.
Q. Do you know who was the trustee of the mortgage-securing bonds?
186 A. The Boston Safe Deposit and Trust Company, the complainant.
Q. What, if any, knowledge did you have at and before the time

you made this purchase as to the franchise of this company, the Grand Haven water works, and the conditions surrounding it upon which you acted?

A. I was somewhat familiar with the statutes of Michigan pertaining to corporations of this character, having had previous occasions to look them up, and I knew that the city could make no contract with a water works corporation for supplying the inhabitants and for fire purposes without first declaring by resolution of the city council that it was inexpe lient for the city to establish and operate its own water works, and before making this purchase of the bonds I sent to the recorder of the city of Grand Haven for a certified copy of the resolution of the council declaring it to be inexpedient to establish and maintain water works; also for a copy of the franchise and contract granted by the city to the company. I saw by the franchise that the company was authorized to build its works and to supply water to the inhabitants of the city, and that the city was to pay the company forty-two hundred dollars per annum as hydrant rental.

Q. You spoke of a statute or statutes with which you were familiar. I call your attention to chapter 84 of Howell's Annotated Statutes of Michigan and ask you if that is the statute to which you refer, and also if section one of that statute is what you refer to when you say "and I knew that the city could make no contracts," etc.

A. It is.

Q. If it had not been for the passage of the resolution you have referred to by the city council would you have purchased these bonds?

Objected to by Mr. Norris that it is incompetent, calling for the witness's conclusions; also that it is immaterial and irrelevant to the issue.

187 Witness answers:

A. I would not.

Q. Why not?

Same objection by Mr. Norris.

A. Because, as I understand and then understood the statute referred to, no water works corporation could have lawful existence in any city where such action had not been taken by the council in declaring by resolution that it is inexpedient for the city to build and maintain water works on its own account, and therefore the bonds of such corporation would have no security; I should say adequate security.

Q. When you say "and therefore the bonds would have no adequate security," you mean in the absence of such resolution?

A. Yes.

Q. Was there anything further connected with the passage of that resolution upon which you acted or which would have caused you to refuse to make a purchase in the absence of that resolution than what you have already stated? If so, state the same fully.

A. I would not have bought the bonds in the absence of that resolution.

Q. Is that all the answer you have to the question?

A. Nor would I have made the purchase if the city had not made what I thought was a binding contract and given the company the privilege of supplying to all the inhabitants of the city water.

Q. I was not asking in regard to the contract. I intended to ask you about that later; but have you any further answer to my former question?

A. The transaction was so long ago that I recollect nothing more now. Something may occur to me later.

Q. Perhaps I may refresh your recollection. What, if any, understanding did you then have as to the meaning and effect of the declaration by the city that it was inexpedient that the city
188 should build works of its own and the organization of a corportion to build such works as a private enterprise?

Objected to by Mr. Norris as incompetent for the witness to testify to his understanding of the resolution or the meaning of the resolution.

A. I supposed that such resolution meant that the city would not engage in water-works business on its own account; that the passage of that resolution was to be taken as a declaration or agreement that the city would not do so, and that such resolution was required before the city could make a contract or grant privileges to a water company.

Q. These bonds which you purchased—what did you do with them?

A. I sold them.

Q. When, about?

A. About the time that I bought them, in the vicinity of the first of January, 1884.

Q. All in one lot or to differant purchasers?

A. I sold them at different times to different people.

Q. So that you have not owned any of them since when?

A. Since 1884.

Q. In selling these bonds to these people what, if anything, did you say to them in regard to the passage of this resolution and this contract?

Objected to by Mr. Norris; the representations of the witness are certainly not binding on the city of Grand Haven.

A. I represented to my customers that the city council had declared it inexpedient for the city to build or operate water works for itself and that it had made a contract and given the Grand Haven water works the privilege of building water works and supplying the inhabitants with water, and under the contract had agreed to pay the company $4,200 per annum for hydrant or fire service; that the contract had a long time to run and made the interest on the bonds secure.

189 Q. State whether or not you called their attention to the statute referred to.

A. I did in some instances, having the statutes in my office.

Q. Mr. Venner, suppose after the Grand Haven water works were built and in the fall of 1887 the city determined that notwithstanding the declaration made by the resolutions you have referred to that it would lay pipe along and parallel to the pipes of the company on the principal streets of the town and furnish water to the residences and stores upon those streets at rates considerably below those charged by the company, what would be the effect upon the market value of these bonds?

A. It would depreciate their value very much.

Q. Do you remember hearing in the fall of 1887 that the city of Grand Haven had begun to lay water pipes on such streets and was threatening to furnish water at such rates?

Objected to by Mr. Norris as immaterial and incompetent.

A. Yes, sir.

Q. Do you know whether a rumor to that effect was more or less prevalent in Boston in the fall of 1887?

Same objection by Mr. Norris.

A. Yes, sir; there was.

Q. Do you know whether or not such rumor had any effect on the market value of these bonds? If so, state the same.

A. It did; there were several lots of bonds offered for sale at that time, but no bids could be obtained for them in consequence of the rumor.

CLARENCE H. VENNER.

Read to the witness, taken, subscribed, and sworn to before me, at Grand Haven, Ottawa county, Michigan, this 14th day of August, 1888.

CHAS. E. SOULE,
*Notary Public, Ottawa Co., Mich.*

190 Cross-examination by Mr. NORRIS:

Q. What was the banker's commission which you received on the purchase of these bonds?

A. I don't recollect. It was so long ago.

Q. What is the usual commission on transactions of like character?

A. A commission depends on a good many circumstances, and there is no fixed commission except for securities bought and sold at the stock exchange.

Q. Was your commission in this instance greater or less than ten per cent.?

A. I should say very much less.

Q. At the time you purchased these bonds you had a copy of the contract between the city of Grand Haven and the Grand Haven water works?

A. I did.

Q. You knew the works were not then built?

A. I understood they were not completed at the time I made the purchase.

Q. Did you inform your customers who purchased these bonds that these water works were not then completed?

A. I may have told some of them that the works were in process of construction.

Q. Were you aware at the time of your purchase that this contract would have no validity unless fulfilled on the part of the water works company?

A. I was not.

Q. You spoke of the competition of the city depreciating the value of the mortgage bonds. Would not -he competition of any other firm or corporation doing like service produce a like effect on a mortgage bond?

A. I do not think that it would, because a city water works would be supported by taxation, while a private company would have to depend on revenues.

Q. Do you know whether or not the interest on these bonds has been paid up to within the last year or so?

A. I do.

Q. Has it or has it not been paid?

191 A. It has not been paid by the company.

Q. Has it been paid?

A. I think my previous answer answers that.

Q. You said it had not been paid by the company. I desire to know if it has been paid at all or not.

A. My impression is that the coupons are still outstanding as a debt of the corporation.

Q. Have those coupons been taken up from the hands of the holders of the bonds?

A. There may be some instances where they have.

Q. Are you able to state whether they have or not?

—. I think a portion have and a portion have not.

Q. When did you part with the last of these bonds, Mr. Venner?

A. Very early in 1884.

Q. You held some of them so late as the fall of 1884?

A. My impression is that they were all sold in the winter and spring of 1884.

Q. Are you aware of the fact that the city of Grand Haven has ever since September, 1884, refused to recognize this contract between it and the Grand Haven water works as having any binding force and refused to pay the hydrant rental therein stipulated?

A. I am not. On the contrary, I supposed it had recognized the contract by availing itself of the water supplied by the company for fire purposes.

Q. Are you aware that the use of the company's hydrants for fire purposes has been contrary to the express orders of the common council?

A. I am not.

CLARENCE H. VENNER.

Read over to the witness, taken, subscribed, and sworn to before me, at Grand Haven, Ottawa county, Michigan, this 14th day of August, 1888.

CHAS. E. SOULE,
*Notary Public, Ottawa Co., Mich.*

192 Redirect examination by Mr. UNDERWOOD:

Q. When you speak of banker's commission do you mean a commission on the par value of the bonds or on the selling price?
A. On the par value. On the par value usually.

CLARENCE H. VENNER.

Read over to the witness, taken, subscribed, and sworn to before me, at Grand Haven, Ottawa county, Michigan, this 14th day of August, 1888.

CHAS. E. SOULE,
*Notary Public, Ottawa Co., Mich.*

UNITED STATES OF AMERICA:

The Circuit Court of the United States for the Western District of Michigan, Southern Division. In Equity.

BOSTON SAFE DEPOSIT AND TRUST COMPANY, Complainant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and GRAND HAVEN WATER WORKS, Defendants.

To the honorable the circuit court of the United States for the western district of Michigan, in equity:

I, Charles E. Soule, a notary public in and for the county of Ottawa, in said district, do hereby certify and report to the said court in said cause as follows: That on the 14th day of August, A. D. 1888, I was waited upon at my office, in the city of Grand Haven, in said county and district, by W. A. Underwood, Esq., of counsel for the complainant, and by Mark Norris, Esq., of counsel for defendant The City of Grand Haven, in said cause, both of whom re-
193 quested me to take the testimony of a Mr. Venner in said cause on behalf of the complainant and filed with me their stipulation authorizing me to take the same, which stipulation is hereto attached and returned into said court as my authority for taking such testimony; that said witness was forthwith produced before me and I took his testimony, which is hereto attached and returned to said court; that said testimony was taken by oral questions stated by counsel for complainant to said witness, which were first taken down in full and at length by me, then read over to the witness by me, and the answer- of the witness written down by me in long-hand on the typewriter as delivered by the witness. After the direct testimony of said witness was concluded he was cross-examined by Mr. Norris for his client, one of the defendants, and his testimony taken down the same as in his direct examination. Said witness, Clarence H. Venner, then read over the testimony and signed his name to

the direct, the cross, and redirect examination and I attached my jurat thereto. Said witness before giving his testimony was by me duly sworn in said court and cause that the testimony which he should give therein should be the truth, the whole truth, and nothing but the truth, so help him God. The foregoing and attached taken by typewriter as this is taken and numbered in sheets from 1 to 9 consecutively is the whole of the testimony taken by me in said cause and by virtue of said stipulation.

| | |
|---|---|
| My fees therein are, for taking 21 folios of testimony for complainant, at 20c. | 4 20 |
| Copy of same for compl't's sol'r | 1 05 |
| Total for complainant, paid | $5 25 |
| For defendant The City of Grand Haven, for taking 11 folios testimony, 20c. | 2 20 |
| Copy of testimony | 1 60 |
| Total paid by the city of Grand Haven | $3 80 |

14th day of August, A. D. 1888.

CHAS. E. SOULE,
*Notary Public, Ottawa Co., Mich.*

194 *Copy of Stenographer's Notes.*

From the office of Ford & Bender, official stenographers, Grand Rapids, Michigan.

In the Circuit Court of the United States for the Western District of Michigan, Southern Division.

BOSTON SAFE DEPOSIT & TRUST CO.
*vs.*
L. HOLMES and THE GRAND HAVEN WATER WORKS.

For pl't'f, W. A. Underwood, A. Howell; for def't, Norris & Norris, G. W. McBride; V. W. Seely, of counsel.

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195 In the Circuit Court of the United States for the Western District of Michigan, Southern Division.

BOSTON SAFE DEPOSIT AND TRUST COMPANY
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS, Defendants.

Appearances: For the complainant, Messrs. W. A. Underwood and A. Howell; for the defendants, Norris & Norris, for the city of Grand Haven; Geo. W. McBride, for the Grand Haven Water Works; V. W. Seeley, of counsel.

In this case it is stipulated between counsel for the complainant and for the defendant The City of Grand Haven and the defendant The Grand Haven Water Works that the testimony of sundry witnesses for the complainant, namely, Wm. N. Angel, Solon L. Wiley, Geo. Van Patten, Augustus M. Cosgrove, Levi Schofield, and George W. Stickney may be taken before Chas. H. Bender, a notary public and stenographer, on the 25th day of June, 1888, at eleven o'clock in the forenoon, at the city of Grand Haven, Michigan, and thence continuing at the same place until the depositions of said
196 witnesses shall be finished; that the testimony of the said witnesses shall be taken down in short-hand by the said stenographer and then read to the witnesses after being so taken and the stenographer's notes signed by each witness, and then the same shall be transcribed, and when transcribed filed with the clerk of said court, and that such transcript so filed may be read in evidence upon the hearing of said cause with the same force and effect as if such depositions had been taken in the usual manner before an examiner appointed by said court.

In the taking of such depositions the testimony of such witnesses shal- be subject to all objections which may be made to the same in the same manner as if taken before an examiner, as aforesaid; but all objections to the taking of the depositions before the said Charles H. Bender are hereby waived.

Each w-tness when produced shall be sworn by the notary in the usual manner and the stenographer shall certify his notes in the usual form and method pursued by United States court examiners.

——— ———,
*Attorneys for Complainant.*

——— ———,
*Attorneys for Defendants.*

197 WILLIAM N. ANGEL, being produced as a witness on behalf of the complainant and being duly sworn by the notary, testified as follows:

Direct examination by Mr. UNDERWOOD:

Q. What is your name, age, residence, and occupation?

A. My name is William N. Angel; my age is 61, and residence, Grand Haven, Michigan; occupation, recorder of the city of Grand Haven.

Q. How long have you been recorder of the city of Grand Haven?

A. Since the 28th day of April, 1887.

Q. (Showing witness a paper.) Will you look at that document and tell us if you know what it is; is it one of the files of your office?

(Paper referred to marked Exhibit One for identification.)

A. It is; it is a contract between the city of Grand Haven and the Grand Haven water works.

It is here agreed by counsel that the stenographer may make a copy of the instrument identified by the witness as Exhibit One, with all the endorsements thereon, and attach the same to the transcript of depositions, and that the same when so attached and returned to the court shall have all the force and effect that the original document would have.

Contract referred to reads as follows:

*Water Works Contract.*

This contract made this eighth day of November 1883, between Grand Haven water works of Grand Haven, Michigan, a corporation organized, existing and doing business at the said Grand Haven under and by virtue of the laws of this State, party of the first part; and the city of Grand Haven, a municipal corporation, created
198 by the laws of the State of Michigan, party of the second part; witnesseth as follows, to wit:

The said Grand Haven water works, for and in consideration of the franchises to be granted to it, water to be rented of it, and the covenants and promises otherwise to be performed by the said party of the second part, hereby agrees to build and erect water works and to furnish water to said city of Grand Haven, to the extent, of the quality, and upon the terms, and under the circumstances specified in the proposition of S. L. Wiley Construction Company presented to the mayor and common council of said city of Grand Haven on the 25th day of September, 1883, which proposition is adopted by said first party in all things, and a copy of which is hereto attached and made a part of this contract; and said first party further agrees to have said water works completed and in full and complete running order before the first day of July, 1884; and said first party further agrees to *identify* and hold said second party harmless from any and all damages that may result from injuries occasioned by ditches and excavations made by it in putting in said water works and the pipes connected therewith, and after the laying of said pipes and water mains to leave the streets of said city in a condition acceptable to the committee on streets roads and bridges thereof.

Said second party *om* its part, for and in consideration of the covenants and promises of said first party, hereinbefore mentioned on its part to be performed, hereby grants and gives to said first party the right to build and erect its works, and to lay its pipes in the streets, lanes, alleys, avenues, docks and other public places in

said city and upon the performance of this contract by said first party, agrees to pay to it the sum of four thousand two hundred dol-
199 lars, ($4,200) per year, in equal quarterly payments on the first days of January, April, July and October in each year; and said second party agrees on its part, that said proposition of the S. L. Wiley Construction Company shall be a part of this contract, and that it will perform all things on its part to be performed as herein specified.

In witness whereof, said party of the first part has caused its seal to be hereto affixed, and this contract to be signed by its president and secretary; and the said party of the second part has caused its seal to be affixed hereto, and this contract to be signed by its mayor and recorder, duly authorized by resolution of its common council, this eighth day of November, A. D. 1883.

JAMES A. NORTON,
*President Grand Haven Water Works.*
T. A. TAYLOR,
*Secretary Grand Haven Water Works.*
H. C. AKELY,
*Mayor City of Grand Haven.*
A. F. PAGELSON,
*Recorder of the City of Grand Haven.*

To the honorable mayor and common council of Grand Haven, Michigan.

*Proposition S. L. Wiley Construction Company.*

To the honorable mayor and common council of Grand Haven, Michigan.

GENTLEMEN: The S. L. Wiley Construction Company, of
200 Greenfield, Mass., a corporation duly organized under the laws of Mass., for the especial construction of water works, understanding that it is desired on the part of the city council to negotiate for the construction of a system of water works in Grand Haven, beg leave to submit herewith a proposition for your consideration.

Organization.

We will, if granted a franchise, organize a local company in accordance with the requirements of your State statutes, and do all that may be necessary to be done in such cases under your charter and laws.

Water supply.

We will locate and establish a good and sufficient water supply for fire, mechanical, manufacturing and domestic purposes, and said water shall not be deleterious to the health of those who may use it.

Source of water supply.

The source of water supply shall be from such point or place as shall best subserve the joint interest of the city of Grand Haven and

the company, but it shall at all times be ample for all the purposes contemplated.

Wells, filters, &c.

We will establish wells of sufficient capacity either open or driven, and construct all needful filters or infiltration galleries, the city in no case to be liable for infringement of patents of driven or filtered wells.

Pumps and machinery.

We will furnish and set a set of pumping engines that shall be modern, capable and durable, and sufficiently massive—and
201 duplicate—with a combined capacity of one and one-half millions of gallons of water in every twenty-four hours. And the arrangements shall be such as to operate separately or combined, so that no accident to the one can endanger the city or interfere with the supply of private consumers.

Pressure power.

The pressure power of the pumping engines shall be sufficient and equivelent to throw six (6) one-inch streams to a perpendicular hight of one hundred feet simultaneously, from hydrants situated upon the line of piping system at any different points in the city, high or low levels, mutually agreed upon.

Pumping station and buildings.

We will establish a pumping station at such point within the city looking to the very best interests of all concerned, as may be practicable, and erect thereon fine, commodious and ornamental buildings, comparatively fire-proof, of entire brick or stone with slate or metal roof, and such buildings shall be a credit alike to the city and the company.

Plan of piping system.

We will *am*ke and submit to the council a plan of the piping system *proir* to entering upon the work, showing the length of system, location of mains and pipes, with schedule showing size, diameter, &c., of all the pipe to be laid, and this plan shall be consist*a*nt with the laws regulating hydraulic pressure and delivery, and satisfactory to the council.

Mains and water pipes.

We will furnish and lay down mains and water pipes in
202 all the streets, lanes, alleys, avenues, docks, and public places required by plan, ranging in diameter, as follows, viz: 12, 10, 8, 6 and 4 inches, and there shall be at least six *n*iles of said mains and water pipes.

Character of mains and piping.

All mains and water pipes shall be of standard weight and *wuality* and of iron, and shall bear a hydraulic test of not less than 300 pounds to the square inch. If wrought iron is used, it shall bear an hydraulic test of 500 pounds and the cast at least 300 pounds to the square inch tested at the place of manufacture.

Boilers.

Will furnish, set and properly encase two return tubular boilers of eighty-horse-power capacity, or sufficient capacity and power to drive the pumping engines easily and with surety and safety.

Fire pressure.

For the safety of the city, and to always guard against the *distruc*tion of property, we guarantee a fire pressure at all times almost instantaneous, at least within five minutes after an alarm shall have been given at the pumping station either by bells, electric alarm, telephone or any practical means the council may adopt.

Hydrants.

Will furnish and set up the piping system at such points as the council may designate, sixty (60) first-class fire-hydrants double nozzled, and of modern make and pattern, *amd* all hydrants shall, like the piping, be subject to an hydraulic pressure of 300 pounds to the square inch.

Extension of pipe line.

We will at any time after the original piping system has
203 been laid, extend the pipe line upon demand or request of the council, provided that every 500 feet of such extension shall yield by hydraulic rent *at* a revenue of fifty dollars.

Privileges granted to the city.

The city shall have free use of all water to fill tanks from which to supply the city water carts for street sprinkling, whenever the city shall so elect.

The city shall have free use of all water necessary for cleansing gutters and flushing out the sewers of the city, provided, that the said cleansing and flushing shall not occur more than twice in each week, and it shall be done under the supervision of the street commissioner or other proper city officer, between the hours of seven and eight o'clock in the forenoon, so as to not interfere with the other uses of the water by the city and general public, notice to be given to the engineer at the power-house for necessary pressure.

All city and public buildings shall have the free use of all water water necessary for legitimate uses.

We will supply water free of charge for a city fountain and as many drinking places as the city may choose to erect.

Water to all water tanks from which to water horses shall be supplied free.

All engine and hose houses shall have free water for all legitimate uses therein.

Conditioned, that all places where free water is granted shall be under the supervision of the street commissioner, or other designated city official, and subject to the same restrictions and
204 rules as private consumers, so as to prevent waste and consequent damage to the property of the city and the company.

Water rates.

The rate of water to private consumers, for mechanical purposes and to manufacturers shall be fair and equitable, and shall not be in excess of the rate charged in any city of like population and under like conditions.

Right of city to purchase.

The city *after* any time after the expiration of ten (10) years, shall have the right by giving twelve (12) months' notice of their intention to do so, to purchase the works at a fair and equitable value of the same at that time, the franchise not to be taken into consideration, but merely the actual value of the machinery, piping system, buildings, &c.

And if a price cannot be mutually agreed upon, then an appraisement shall be made of said works, which shall be in accordance with the laws governing such cases in the State of Michigan.

In consideration of the above, we ask the city of Grand Haven, Mich., to

First. Grant a franchise to the "Grand Haven water works," a corporation to be hereafter organized, to lay mains and pipes for the conveying and distribution of water throughout the city of Grand Haven, this franchise to be for the period of twenty-five years.

Second. To pass such ordinances as will protect the machinery, buildings, &c., of the company from injury or destruction by evil and malicious persons, and such other ordinances as will enable us to carry out the provisions of our proposition.

205 Third. We ask the city to rent of us sixty (60) fire-hydrants at an annual rentage of seventy ($70.00) dollars each, or a total annual rental of ($4,200.00) four thousand two hundred dollars, said rental to commence upon the location of and furnishing water as hereinbefore provided, of each of said hydrants, and approval of common council, payments to be made quarterly on such dates as will best subserve the interests of the city.

Free hydrants.

We agree to give the city the right to put as many fire-hydrants upon any existing lines, or extension, at any time during the franchise, as they may deem best, the city paying for such hy-

drants and setting, but the water shall be furnished for the said free hydrants without cost during the franchise.

THE S. L. WILEY CONSTRUCTION COMPANY.
S. L. WILEY, *Pres.*

Grand Haven, Mich., September 25th, 1883.

206 Q. Who was your predecessor in office?
A. Daniel C. Wachs.
Q. Do you know who was recorder of the city of Grand Haven in 1883?
A. Charles T. Pagelson.

It is agreed that this paper is the contract that is referred to in the bill and answer.

By Mr. McBRIDE:

Q. These contracts were in duplicate?
A. Yes, sir.

Mr. HOWELL: I suppose it will be conceded upon both sides that the signatures to the contract were those of the water works company—the president and the secretary—and, on the part of the city, the mayor and recorder?
Mr. NORRIS: I don't know the signatures of your parties. As far as the city is concerned I presume the originals are all right.

Q. Have you made an examination among your files for a map or plat of the pipe lines of the Grand Haven water works?
A. Yes, sir.
Q. Have you found such a map or plat?
A. Yes, sir; I have it here.

(Plat referred to marked Exhibit 2.)
It is agreed that the copy or tracing of this map may be made and attached in the place of the original map with the same force and effect, and the same is offered in evidence.
Exhibit 1 is also offered in evidence.

Read over to the said witness and by him—
(Signed) WILLIAM N. ANGEL.

Subscribed in my presence this 25th day of June, 1888.

207 SOLON L. WILEY, being produced as a witness on behalf of the complainant and being duly sworn by the notary, testified as follows:

Direct examination by Mr. UNDERWOOD:

Q. State your age, residence, and occupation.
A. 48; hydraulic engineer.
Q. Your name.
A. Solon L. Wiley.

Q. Your residence.

A. Greenfield, Massachusetts.

Q. How long have you been a hydraulic engineer?

A. Twenty years and over.

Q. During that time how much experience have you had in the construction and operation of water works?

A. I have built about 25 works and had general management during that time of ten or twelve *to* a time.

Q. What water works have you constructed?

A. Well, probably I had better give a list of the larger ones; I can give quite a large list. I built water works in the East at Garner, Massachusetts; Athol, Massachusetts; Greenfield, Massachusetts; Shelburne Falls, Mass.; Saratoga Springs, New York. I laid out the works at Glens Falls, New York; I didn't build them, though. I built the works at Owego, New York. I rebuilt the works at Auburn, New York; I built the works at Tiffin, Ohio. I rebuilt a portion at Urbana, Ohio; I built the works at Richmond, Indiana; I built the works at Adrian, Michigan; rebuilt the works at Niles, Michigan. I built the works at Appleton, Wisconsin. I built the works at Ottumwa, Iowa. I built a large hydraulic in New Mexico—eighteen miles of pipe line—Las Vegas, New Mexico.

208 Q. Is that where you built the eighteen miles of pipe line?

A. No, sir; that is San Pedro—the eighteen miles; Aztec, New Mexico; Clifton, Arizona, and rebuilt and am rebuilding now the works at Omaha, Nebraska. I built a good many small works that are no account, particularly.

Q. Did you build any in Pennsylvania?

A. I built one work at Towanda, Pennsylvania, and laid out a work at Washington, Pennsylvania.

Q. Do you know and did you know of a company doing business in this State in the years 1883 and 1884 called the S. L. Wiley Construction Company?

A. Yes, sir.

Q. What relation did you bear to that company?

A. I was president and general manager.

Mr. UNDERWOOD: We now offer in evidence a certified copy of the articles of incorporation of the Grand Haven water works.

(Paper referred to marked Exhibit 3.)

Q. You have seen this certified copy?

A. I have not.

Q. Will you look at them and tell us whether or not those are the articles under which the Grand Haven water works has acted?

A. Yes, sir.

Q. Are you acquainted with James A. Norton, who was one of the incorporators of that company?

A. Yes, sir.

Q. Do you know what office in that company he exercised in 1883?

A. President of the company.

Q. Were you acquainted with P. A. Taylor, who was also a member of that company?

A. Yes, sir.

Q. Do you know what office he exercised in 1883?

A. Secretary and treasurer.

209 Q. Are you acquainted with their signatures?

A. I am.

Q. Please look at the signature James A. Norton, president, and T. A. Taylor, secretary, on the contract, Exhibit 1, and state, if you know, in whose handwriting those signatures are.

A. That is James A. Norton's and T. A. Taylor's.

Q. James A. Norton's signature is in his handwriting?

A. Yes, sir; and Mr. Taylor's in his.

Q. Do you see the seal of the Grand Haven water works?

A. Yes, sir.

Q. Do you know whose seal that is?

A. That is the Grand Haven water works'.

Q. Attached to this contract and as a part of it is a proposition purporting to come from the S. L. Wiley Construction Company to the honorable mayor and common council of Grand Haven. This proposition, by the terms of the contract, is made a part of the contract itself. You remember the proposition, do you, in general terms?

A. Yes, sir.

Q. Now, were you here during the summer and winter and the spring and summer following the making of this contract at various times?

A. Yes, sir.

Q. Do you know whether the Grand Haven water works built any works or not—water works—after the making of this contract?

A. No, sir.

Q. Do you know whether the Grand Haven water works built any water works after the making of this contract?

A. I know they didn't build any.

Q. The Grand Haven water works?

210 A. They built the works here; that is all.

Q. Do you know whether the Grand Haven water works after the making of this contract built any works here in Grand Haven?

A. Yes, sir; I do.

Q. Under whose general management were those works built?

A. Under T. A. Taylor's and my own.

Q. Who had the general management and control of the building of those works?

A. I had.

Q. Are you able to state the number of feet of each kind, of each size, and the sizes of the pipes which were laid and the streets upon which they were laid?

A. Yes, sir.

Q. Will you tell the notary and give us that information?

A. On Washington street, from the pump-house to Griffen street, 1,600 feet, 12-inch; from Griffen street to Seventh street, 3,300 feet, 10 inch; from seventh street to Water street, 3,200 feet, 8-inch; on Third street, Washington to Monroe, 1,650 feet, 8-inch. I should have said on Washington street, Griffen to Seventh, and Washington street, Seventh to Water, in the two preceding numbers of 10 and 8 inch; Franklin, Eighth to Water, 3,650 feet of 6-inch; Griffen, Washington to Fulton, 675 feet, 6-inch; Fulton, Griffen to Second, 5,275 feet, 6-inch; Washington to Pennoyer; I conclude it is on Fulton; I couldn't tell exactly without a map; 625 feet, 6-inch; Monroe, Seventh to saw-mill, 2,875 feet, 6-inch; Water, Franklin by the round-house, 1,000 feet, 6-inch.

Q. On what street is that laid?

211 A. It don't say; it is on Franklin, Water, from Franklin around by the round-house, 1,000 feet, 6-inch; Second, Clinton to Washington, 700 feet, 6-inch; Third, Monroe to saw-mill, 1,000 feet, 6 inch; Fifth, Franklin to Howard, 1,050 feet, 6-inch; Seventh, Franklin to Monroe, 2,650 feet, 6-inch; Fulton, Second to First, 450 feet, 4-inch; Pennoyer, at Griffen, 600 feet, 4-inch; Elliott, 700 feet, 4-inch; Madison, Seventh to Fifth, 850 feet, 4-inch; Madison, Third to Second, 450 feet, 4-inch; Water, Clinton to Franklin, 300 feet, 4-inch; First, Washington to Columbus, 350 feet, 4-inch; Second, Howard to Clinton, 575 feet, 4-inch; Sheldon, Howard to Grant, 600 feet, 4-inch; Seventh, Lafayette to Franklin, 650 feet, 4-inch; Eighth street, Pennoyer to Frankiin, 525 feet, 4-inch.

Q. Is that all?

A. Yes, sir.

Q. How many feet of each kind can you tell us?

A. 1,600 feet of 12-inch; 3,300 feet of 10-inch; 4,850 feet of 8-inch; 19,500 feet of 6-inch; 6,050 feet of 4-inch.

Q. Making a total of how many feet of pipe?

A. 35,300 feet.

Q. How many miles?

A. Six sixty-eight hundredths miles.

Q. Of what material was that pipe of which you have just given us the details?

A. All of cast iron, except a portion that was laid across the river and in some saw-mill yard down here where the tan bark would eat up the pipe; I could not tell you how many feet, but not a great many.

Q. That was a line of pipe that went across the river?

A. Across the river to Boyden's mill.

Q. Of what material was that pipe?

212 A. It was what was called calumine wrought iron with a tin coating—a tin and lead coating.

Q. Can you tell us anything in regard to the weights of this cast-iron pipe that was laid here? Do you know what the standard weight of pipe is?

A. It was all standard weights.

Q. But for the calumine or wrought-iron pipe?

A. It was regular standard weight of wrought-iron pipe.
Q. Who made the cast-iron pipe?
A. The Ohio Pipe Company of Columbus, Ohio.
Q. And the wrought-iron pipe—who made that?
A. The National tube works of McKeesport, Pennsylvania.
Q. Whereabouts did you build the pump-house?
A. I would say before you proceed with that that that does not include the specials, which increased the mileage quite a considerable; probably up to over seven miles.
Q. By specials what do you mean?
A. The sections where the hydrants joined onto the main lines.
Q. What sized pipe are they?
A. Varying according to the sizes upon which they are attached.
Q. What is the smallest?
A. Four-inch and the largest is twelve-inch.
Q. I ask you if you built a pump-house; and, if so, where you located that.
A. We located that near the Beach Tree mills, as it is called, as I understand it.
Q. On what street?
A. At the head of Washington street.
Q. At that point and in that building you set some pumps?
A. Yes, sir.
213 Q. What manufacture of pumps?
A. Made by Walker, of this State.
Q. And what was the style of pump?
A. It was a direct-acting plunger pump.
Q. Do you know whether it was a pump that was suitable for use in water works or not?
A. It was a proper pump to put into water works plants, ample in its capacity and strength.
Q. What was the capacity of the pump?
A. About two millions—the two pumps combined—in 24 hours' run.
Q. Two millions of what?
A. Gallons of water every day.
Q. You speak about both combined. Will you tell us whether the pumps were so arranged that they could be used separately or together?
A. Yes, sir; they run independent of each other.
Q. Or they could be combined?
A. They could be combined.
Q. What do you say as to the durability of these pumps?
A. They were durable and strong.
Q. Do you know anything in regard to the pattern of them—whether it was a modern or an antiquated pattern?
A. It was a modern style of pump.
Q. What was the pressure power of the pumps?
A. Capable of running 6 or 8 streams 100 feet high with ease.
Q. What sized streams?
A. A one-inch stream.

Q. At or near the pump-house did you locate any wells?

A. Yes, sir; a large well near by.

Q. Will you tell us what kind of a place it was where you located the pump-house at and in its immediate neighborhood as a source of water supply?

A. We found ample water there and quite a heavy strata of gravel about 6 to 8 foot thick that was always full of water
214 and always has been ever since the work has been built up within 4 or 5 feet of the top of ground.

Q. Will you tell us what you know in regard to that locality as a sufficient source of water supply for fire, mechanical, domestic, and manufacturing purposes in the city of Grand Haven?

A. I think it is the best and most suitable that there is around this city.

Q. What examinations did you make to find a suitable source?

A. We made a careful examination by driving wells in different portions of the city for several weeks before we decided upon that point.

Q. Now, will you tell us why you say this was the best?

A. Well, one great reason was it was free from the contamination that it was subject to herein, the old works, the sewerage, and that was the complaint here, and another was that we found there a character of water that was pronounced by Prof. Kedzie as being excellent in character and free from every——

Mr. NORRIS (interrupting): What Prof. Kedzie said would not be material.

Q. State your own knowledge about it.

A. Our own knowledge was after repeated trials in our general way of examining waters for purposes of trying to find out whether there was any sewerage or any deleterious substances in it. We found it was perfectly pure.

Q. And as to the quantity of water, what do you say of that locality in and about there?

A. We found it was very hard to exhaust it. When we put in our well there we had great difficulty in getting the well deep enough.

215 Q. What time did you commence to build your pump-house?

A. We commenced some time in the winter on the excavation—the winter of 1884.

Q. About when was the pump-house building completed?

A. Some time in the summer of 1884.

Q. About what time in the summer, if you can tell us?

A. Well, I couldn't say exactly, but I should say the latter part of the summer of 1884.

Q. What did you do in regard to building wells in that locality, either open or driven?

A. We drove a large number of wells; I think about 45 or 50 first of these tubular wells.

Q. They were driven how?

A. About twenty feet—from eighteen to twenty feet below the surface.

Q. Do you mean scattered all over the space, helter-skelter?

A. Over a space of about 1,000 feet in length and from 18 to 20 feet apart along this line.

Q. From 18 to 20 feet along the line?

A. I should think so; yes, sir.

Q. What did you do about connecting them together?

A. We connected them into this one long line of pipe that ran out—one straight line.

Q. Ran out from where?

A. From the pump-house; connected with the pumps.

Q. Was that line connected with any other well or anything of the kind?

A. Connected with a well also.

Q. What well?

216 A. The well outside of the building. We put a well outside of the building.

Q. Is that a drive well?

A. No, sir; a large well.

Q. What size well?

A. It was the well that I referred to when I said it was impossible for us to pump it down. It was about 10 or 12 feet in diameter.

Q. About how deep?

A. I should think it was 18 or 20 feet.

Q. Then the water from these drive wells—how did you get them into this well?

A. Either by putting them onto the suction of the pump or syphon them into the well.

Q. When you syphoned them into the well how did you get the water into the system to pump it out?

A. We had another pipe that connected with the pumps that ran into the well from the pump.

Q. Do you know from that line—that forty or forty-five drive wells—what the supply was per diem in the fall or winter of 1884?

A. In the vicinity of three -undred thousand gallons a day.

Q. For a city of the size of Grand Haven in the opening of the water works, with the consumers which the Grand Haven water works had at the time when you opened your water works to the public, do you know whether or not that supply of water—three hundred thousand gallons a day—was sufficient?

A. Yes, sir; it was ample.

Mr. NORRIS: I object to that, and move to strike it out. It is a hypothetical question and no facts to base it upon. You do not show how many consumers you have got and what the size of the city of Grand Haven is or anything about it.

Mr. UNDERWOOD: The size of the city of Grand Haven is admitted by the answer.

217 Mr. NORRIS: I guess that is so.

Q. In what direction from the pump-house did this line of drive wells run?

A. To the southeasterly.

Q. Will you now tell us whether additional line of drive wells could be run from the pump-house in different directions; and, if so, in what directions as your needs for water increased?

A. Yes, sir; they could be run in all directions from our pump-house.

Q. With what results?

A. With good results; with as equally good results as the lines that are now laid or laid at that time.

Q. Since that time have you put in additional lines?

A. We have added one line.

Q. Running in what direction from the pump-house?

A. In an easterly direction, towards the river bank.

Q. How many wells are there upon that line—driven wells.

A. About 35 to 40 more.

Q. What was the result of putting in that line of wells?

A. Good results; we obtained a good flow from them.

Q. How did it compare with the flow from the other line?

A. About the same per point as the other line.

Q. You mean by per point—you mean per driven well?

A. Yes, sir.

Q. These driven wells—you drove them about how large in diameter?

A. About two inches.

Q. The bottom of them is what?

A. An iron point.

Q. And above the iron point?

A. It is gause of brass wire.

218 Q. For how great a distance?

A. About 3 feet, I should say.

Q. What was the quality of water you obtained from those wells?

A. Excellent quality; just about the same as we always obtained from all of the wells?

Q. From all of these driven wells what was the quality?

A. Excellent quality.

Q. Do you know whether or not that water you obtained from these wells was deletarious to public health of those who had made use of it?

A. It could not be.

Q. In addition to putting in the line of driven wells, did you take any measures for any other—for getting water from any other place or source?

A. I did.

Q. What was that?

A. We put a line to the river.

Q. What river?

A. Grand river.

Q. Whereabouts did it strike Grand river with reference to the city of Grand Haven?

A. To the easterly.

Q. Was it above or below or in the middle?

A. Above the city, about a mile.

Q. What was that line put in for; was it above the corporation line of the city?

A. I think it is within the corporation line; still, I don't know.

Q. But above the settled part?

A. Right east from the pump-house to the river at the head of Washington street.

Q. What was the object of putting in that line?

A. It was on account of any extensive conflagration or any break-down of our other lines. It is something that we always do.

219 Q. Do you know from your experience in building and managing water works in regard to the quantity of water which is required for a given population?

A. It varies in manufacturing and non-manufacturing towns. In manufacturing towns it is about 30 gallons to the head.

Q. 30 gallons per diem?

A. Yes, sir; non-manufacturing towns, 40 gallons to the head.

Q. When you speak of per head who do you count?

A. Adults.

Q. In a town?

A. Yes, sir. I made a mistake in the answer just given if I said that manufacturing towns took only 30 gallons; I meant 40 gallons, and non-manufacturing towns take 30 gallons to the head.

Q. When you speak of the quantity required being 30 and 40 gallons per head, for what purposes do you include?

A. I mean for all purposes.

Q. Fire and everything else?

A. Fire, domestic, and mechanical.

Q. (Showing witness a map marked Exhibit 4.) Do you know what that map is?

A. It represents our pipe lines.

Q. Do you know with reference to this map? (Counsel shows witness another map.)

A. It is the same as that.

Q. It is a duplicate of Exhibit 2?

A. Yes, sir.

Q. And is this the one that you had for a working map?

A. Yes, sir.

Q. Have you looked at this map, Exhibit 2?

A. Yes, sir.

Q. I see that the hydrants—the little round spaces on the

220 lines of pipe on this map, Exhibit 2—what do they represent?

A. Hydrants.

Q. And are you able to tell us whether or not the hydrants were located and set upon the pipe at the places marked upon this map?

A. Yes, sir; or near them.

Q. How many hydrants were located and set?

A. 50.

Q. Altogether?
A. I can tell by consulting a memorandum.
Q. Count them up on the map if you are not clear about it.
A. I think it was 60. (Witness counts upon the map 60.)
Q. What kind of hydrants were they?
A. They were what is called the Ludlow hydrant.
Q. Single or double?
A. I think they were all double; I wouldn't be certain.
Q. As to quality?
A. They were the best there is in the market, sir.
Q. And the boilers in the pump-house?
A. They were the best we could buy.
Q. Do you know what the horse-powere capacity was?
A. I think they were 80-horse-power each.
Q. How many did you have?
A. Two boilers.
Q. Now, will you tell us whether or not they had sufficient capacity to drive the pumping engines easily?
A. Ample.
Q. What class of workmanship and make were they?
A. They were procured——
Q. (interrupting). I didn't ask who they were procured from; what class of workmanship and make.

A. They were first-class workmanship and first class in
221 material. Tensil-strength was 60,000 pounds. The boiler tubes were the best there is in the market.

Q. In order to throw a fire stream of one inch in diameter, what pressure, how many pounds pressure, is required at the nozzle, at the hose nozzle, to throw it 100 feet high in the air?
A. And how many feet of hose?
Q. How much at the nozzle?
A. About 50 pounds, or a little less.
Q. If a stream is taken directly from the hydrant, how much pressure would be required at the hydrant to throw the stream?
A. The same, if taken directly from the hydrant.
Q. And for a length of hose 50 feet long, how much additional pressure would be required?
A. Two and a half inch hose?
Q. Yes, sir; a two and a half inch hose.
A. About from three to five pounds, dependent upon the character of the hose.
Q. Are you acquainted with the elevations of the hydrants with reference to the pump-house?
A. Somewhat.
Q. What is the extreme difference in pressure between any of the hydrants in town and the pump-house, if you know?
A. I don't know positively, but I have been over the ground and I did know, but probably my memory is not perhaps correct, but I think about five or eight pounds.
Q. 5 to eight pounds?
A. Yes, sir.

Q. That there is lost between the pump-house and the highest point?

A. Yes, sir.

Q. How long would it take at the pump-house when the pumps were being operated simply for domestic service here in town
222 to put on a fire pressure sufficient to throw streams 100 feet high in the air, one inch streams?

A. Within a minute or two of the notice being given.

Q. With these pumps?

A. Yes, sir.

Q. Do you know what pressure is usually carried and has been usually carried at the pump-house here for the purpose of domestic service?

A. 25 to 35 pounds.

Q. What water pressure up to the capacity in gallons of the pumps are these pumps capable of exerting?

A. A couple of millions a day.

Q. That is the amount of water they can pump, but what is the extreme pressure at which they can pump two millions a day?

A. 80 pounds to the square inch.

Q. Water pressure?

A. Water pressure.

Q. What office do you now hold in the Grand Haven water works?

A. I think I am president of it.

Q. And you have been for how long?

A. Well, I guess for three years—three or four years.

Q. And since its organization have you been an officer of it?

A. I believe I have.

Q. Since it went into operation who has had the general management or its affairs?

A. I have had.

Q. I now ask merely for what knowledge you have upon the subject so far as you know since the works went into operation and up to the time when this action was brought—say last October—what number of consumers the company has had here.

223 A. I could not tell you. I think about 250.

Q. Do you mean to say all the time, or is that the highest number?

A. That is the highest number, I think. I know we have lost a good many during the last year.

Q. So far as you know—as far as your knowledge goes—what has been the character of the water which has been supplied by the Grand Haven water works to its consumers since the works were opened up to and including the time when this suit was commenced?

A. It was excellent in quality, except what I heard last season, that there was a period that the water was warm, but outside of that I never heard a word of complaint.

Q. I mean so far as you know of your own knowledge as to the water being supplied.

A. I have no knowledge except that it has been excellent in quality during the whole period.

Q. What do you say as to the water which has been supplied during that time—at any time—being, so far as you know, deletarious to the health of those who used it?

A. I do not believe it is deletarious to health and I never heard that it was.

Q. So far as you know what do you know about its being deletarious to public health?

A. I know that there is nothing in it deletarious to public health.

Q. You spoke of a little time last summer when you say you heard some complaint. Were you here yourself?

A. No, sir; our superintendent wrote about it.

Q. I don't care what he wrote.

A. I have no knowledge whatever except by what he wrote.

Q. You were not here and heard the complaints yourself?

A. No, sir.

224 Q. So that in regard to the water last summer you have no personal knowledge about it?

A. I have no knowledge.

Q. Do you know anything about the execution by the Grand Haven water works in the fall or early winter of 1883, immediately after the adoption of this contract with the city, of any bonds?

A. Of the Grand Haven water works?

Q. Yes, sir.

A. I did, sir.

Q. And of a mortgage?

A. I did, sir.

Q. Do you know who delivered those bonds, if anybody, and the mortgage to the Boston Safe Deposit and Trust Company?

A. I delivered them.

Q. How many of the bonds were there?

A. 70.

Q. Of what denomination?

A. $1,000 each.

Q. After the delivery of those bonds to the Boston Safe Deposit and Trust Company do you know what became of them?

A. They were sold.

Q. Sold to whom?

A. C. H. Venner and Company.

Q. Who are C. H. Venner and Company?

A. Bankers in Boston.

Q. Do you know whether those bonds are still outstanding?

A. They are.

Q. And unpaid?

A. They are.

Q. Do you know whether or not any of the interest upon those bonds is in default?

A. It is.

Q. How much and when, since when?

A. Well, the interest during the last year has not been paid
225 to any of the bondholders, but prior to that the construction company had paid the interest.

Q. The construction company had paid the interest prior to that to the bondholders?

A. Yes, sir. I think there is two sets of coupons that has been in default now.

Q. At what time—due when?

A. They are either due in January—July and January or April and October, and I could not tell you which.

Q. You mean the two sets due from when—what time?

A. A year ago last January or a year ago last April.

Q. Do you know whether this Boston Safe Deposit asd Trust Company acted as trustee under that mortgage or not?

A. They did.

Q. Do you know whether the Grand Haven water works has any other property except its water works which were pledged in the mortgage?

A. It has not.

Q. Or any other means except that?

A. It has none.

Q. I notice that in Exhibit 3, the articles of incorporation, that it is first set out in these words: "Resolved, That it is *in*expedient to have constructed water works for the purpose of supplying the city of Grand Haven and the inhabitants thereof with water for fire, domestic, and other purposes, but that it is inexpedient for the city of Grand Haven under the power granted in the charter to build such works." I want to ask you whether your attention had been called to that resolution previous to the time of the proposition by the construction company to the city of Grand Haven which was the basis of the contract.

A. It had been.

226 Q. I want to ask you what would have been the action of the construction company as to making that proposition if there had been no such resolution or determination by the common council.

Mr. NORRIS: We object to that as incompetent. It calls for the conclusion of the witness—the operation of his mind.

The WITNESS: We should not have built the works under any considerations whatever.

Q. What do you say from your experience in the water-works business as to the population and the quantity of water required in the city warranting the constructing of more than one system of water works?

Mr. NORRIS: That is objected to as incompetent, immaterial, and not in issue.

A. I should say under no circumstances I would not.

Q. That is not the question that I asked you. What do you say and what would you say as to the population and quantity of water

required in the city warranting the construction of more than one system of water works?

A. It would not be warranted under any circumstances.

Q. You know in general terms what the cost of operating the works is here? I don't ask you how much; I ask if you do know.

A. I couldn't tell, sir, except by examination of the books. I know we have not got anything out of it.

Q. Did you have anything to do with fixing the rates here for private consumers by the Grand Haven water works?

A. I did.

Q. What experience have you had in regard to water rates in this State and other States, both of those of water works which
227 you have constructed yourself or those with which you are acquainted—what experience have you had?

A. I have fixed a great many of them.

Q. What has been your knowledge in regard to other places where you have not fixed them yourself?

A. My knowledge is very extended upon the subject of rates.

Q. What do you say as to the rates in Grand Haven, as to whether they are above or below the average rates charged by water companies? I do not mean by water works operated by cities, but by water companies in this State furnishing water under like circumstances and conditions.

A. They are lower.

Q. Supposing that the inhabitants of Grand Haven generally were water consumers and supposing that the sum agreed to be paid by the city in the contract was regularly paid, what do you say as to whether the rates charged in Grand Haven are or are not sufficient, together with the rental from the city, if paid, to enable the company to realize an annual dividend of ten per cent. upon its capital stock after paying necessary repairs and expenses, interest on borrowed money, and a five per cent. sinking fund for the extinguishment of its funded debt?

Mr. NORRIS: I object to that question. You are supposing a lot of things that are not in evidence.

The WITNESS: Under the most favorable conditions it would not pay one-tenth of one per cent. upon the capital.

Q. When you came here about the time this contract was made between the city and the Grand Haven water works, did you see the pumping station that the city then had?

A. I did.

228 Q. About what time was that that you came here with reference to the time when the contract was finally made?

A. I came here first, I think, in August.

Q. You were here from that time until the contract was made, in November, how often?

A. Three or four times.

Q. You say you did see that pumping station at one of those times?

A. Yes, sir; I made a careful exmination of it.

Q. Do you know how much pipe and what it was that the city had in at that time?

A. Yes, sir.

Q. What?

A. Well, they had mostly wooden pipe in.

Q. How much of it was there and what sizes?

A. Oh, they were running from, I think, four, six, eight, and ten, the small size of pipe. I don't think there was anything above eight.

Q. How much of it was there?

A. I should think, perhaps, there was 2,500 feet. I don't know exactly how much, but I know about where it run.

Q. The pumping station, where was that situated?

A. On the bank of the river, below the junction of Washington street and the river.

Q. Washington is the main business street in the city?

A. Yes, sir.

Q. How was that situated as to being above or below the main sewerage part of the city?

A. It was below the main sewerage of the city?

Q. Do you know what the source of water supply was at that pumping station?

A. Yes, sir; I think there was four or five driving wells.

Q. Right near the river bank?

A. Right near the river bank, and in the sand and an outlet into the river of an eight or ten inch pipe.

229 Q. Did you examine that outlet to the river?

A. I did.

Q. Do you mean the outlet for the water to run into the river?

A. No, sir; a suction line into the river.

Q. Do you know anything of your own knowledge as to where the water that was pumped into this little system of water works of the city was obtained from?

A. They told me——

Q. (Interrupting.) I don't ask you what they told you.

A. I don't know only what I saw there when they opened the valve and took the water from the river, sho-ing its working, and a portion of the time they used the valve and a portion of the time they didn't.

Q. While you were there?

A. Yes, sir.

Q. At the time or about the time when this contract with the city was made do you know whether or not any agreement or contract was made between the city and the S. L. Wiley Construction Company in regard to a sale by the city and a purchase by the construction company of this plant?

A. Yes, sir.

Mr. NORRIS: I object to that question and move to strike it out. There is no allegation in the bill of anything of that kind, and it is

immaterial and incompetent and no contract made for the sale of it that was binding; none that was fulfilled or attempted to be.

Q. What was there done about that that you know about?

Mr. NORRIS: The same objection.

A. We made a contract with the council that we should take that work at a sum stated; $2,500, I think, was the first amount that we were to take—the works and the plant—and they
230 were to lease us the ground where the engine-house stood for a term of years.

Q. How was that contract made, verbally or in writing?

A. Verbally.

Q. Whereabouts was it made?

A. The arrangement was made in this chamber.

Mr. NORRIS: I object to all of this examination.

Q. At a meeting of the council?

A. Yes, sir.

Q. When was that with reference to either your putting in your proposition or the acceptance of it or the making of the contract with the Grand Haven water works?

A. It was at the same time.

Q. The same time of what?

A. The making the contract.

Q. The making of the contract with the Grand Haven water works?

A. Yes, sir.

Q. When were you by that contract—when was the construction company to take these works?

Mr. NORRIS: The same objection.

A. As soon as our works were completed and in operation.

Q. In the answer of the defendant The City of Grand Haven, in paragraph 13, among the records and proceedings of the council purporting to be set out in that paragraph is the following, which I read to you:

"GREENFIELD, MASSACHUSETTS, *December* 26, 1884.

To the mayor and council of Grand Haven, Michigan.

GENTLEMEN: During the negotiations of the contract for the construction of the Grand Haven water works, this company agreed verbally to purchase of the city the building and plant used by them for water-works purposes, when said proposed water works should be completed and ready for use. This company now
231 has an opportunity to dispose of a part of said plant if it can have the same within three weeks, and this company respectfully informs the council if it will within that time, namely three weeks, take such action as will enable this company to at once acquire title or possession of such building and plant, it will take the same and pay for it according to the terms of said agreement,

but if not, if the council shall fail to take such action within said time, the council is respectfully informed that this company will not take said plant or building or in any manner consider itself bound by said agreement.

THE S. L. WILEY CONSTRUCTION COMPANY,
By S. L. WILEY, *President.*"

Do you remember that document?

A. Yes, sir.

Q. That was sent to the city of Grand Haven?

A. Yes, sir.

Q. In answer to that what reply did your company ever get?

A. No reply.

Q. Will you tell us how much, if anything, the corporation, the Grand Haven water works, has ever received as rental or in any other manner from the city of Grand Haven?

A. We have received nothing.

Q. It is alleged in the bill by the complainant, The Boston Safe Deposit and Trust Company, that it has caused application to be made to the company, the Grand Haven water works, to take measures to prevent the action by the city in laying water pipes and supplying water to the inhabitants of the city of Grand Haven and that the water company has neglected and refused to take any such measures. What do you know in regard to the application being made by The Boston Safe Deposit and Trust Company, the
232 complainant, to the Grand Haven water works, and as to what the Grand Haven water works did in the premises, whether such application was made or not and what they did?

A. Mr. Miles, the treasurer of the company, made application to me a year ago to restrain the old company from doing any business.

Q. What old company?

A. The city works.

By Mr. NORRIS:

Q. Was the application in writing?

A. No, sir; verbal. He wrote me that——

Mr. NORRIS (interrupting): I object to that.

Q. I don't care about what he wrote you; tell whether or not he did make application.

A. He made application to me and made a demand upon us—upon the Grand Haven water works—to do this.

Q. What did you do?

A. I told him we could not do it; we had no money to go into any legal contest, and that the Grand Haven water works were unable to enter suit and I could not comply with his request. I felt that it was impossible for us to raise the money.

Q. Do you know what pipe has been laid by the city within the last year and along upon what streets it has been laid?

A. Personally I don't know, only from hearsay—by a letter.

Q. You have not been about to examine where they set the hydrants?

A. I have seen the hydrants. I know where the hydrants are located.

Q. Do you know any of the streets upon which they are?

A. Yes, sir; I do. I know where all the hydrants are located.

Q. Very well.

A. Upon Washington street, parallel with the line of the Grand Haven water works, and on the street in the rear of this one.

233 Q. That is, in the rear of Washington street?

A. To the south of Washington street—Franklin; that is the name—that is all I have seen.

Q. Do these streets, Franklin and Washington—how do they compare for customers with other streets in the city?

A. Our heaviest consumers are on those two streets.

Mr. UNDERWOOD: I offer in evidence a certified copy of the water rates adopted by the city September 29th, 1887.

(Paper referred to marked Exhibit 5.)

Q. I will show you a printed book (book referred to marked Exhibit 6) and ask you if you know what that book is.

A. Yes, sir.

Q. What is it?

A. Water rates of the Grand Haven water works.

Q. And the rules and regulations?

A. Yes, sir.

Mr. UNDERWOOD: I offer this in evidence.

Q. The water rates are upon what pages?

A. 12, 13, and 14.

Q. I ask you to examine that schedule of rates, Exhibit 5, adopted by the city. (Counsel presents papers to witness and witness examines same.) Have you examined it sufficiently—you have seen it before, I suppose?

A. No, sir; I never saw that before. It is certainly a curiosity.

Q. What do you say as to those rates for water with reference to the cost of furnishing water?

A. It is impossible to furnish water at those rates and get a new dollar for an old one.

Q. You testified awhile ago about the hydrants and identified them upon the map. Will you tell us how you came to set the hydrants where you did?

A. I went around with a committee of the council to locate the hydrants and we located them; that is the reason they are

234 indicated on the map.

Q. This pump-house of the old city works that you say was in existence when you came here—what was that, a brick or wooden building?

A. A wooden building.

Q. The pump-house that was built by the Grand Haven water works at the head of Washington street—what was that built of?

A. Brick and stone.

Q. With what kind of a roof?

A. Slate roof.

Q. Will you tell us as to what kind of a building that is as to being fire-proof?

A. It is practically a fire-proof building.

Q. After the works were completed and went into operation here did you, in addition to putting down additional line of drive-wells, did you do anything in regard to the building of a reservoir?

A. Yes, sir.

Q. Whereabouts was that?

A. At the south of the works.

Q. About what size?

A. Oh, it is about three-quarters of a million gallons.

Q. What was the object of building that reservoir?

A. It was only so that in case we wanted an extra supply of water at any time, in case any drive-well gave out, that we would have an extra supply of water.

Q. For storage the object was?

A. For storage; yes, sir.

Q. If the drive-wells would yield you more than a sufficient water supply for the daily wants of the city of Grand Haven, why did you need any storage capacity?

A. Well, sir, we discovered that the wells gradually grew less on us, and that we attributed to be a scarcity of water supply, and we
235 thought by pumping nights we could store plenty of water without any trouble, but upon a more extended examination we find now that the trouble was in the stopping up of the wire gauze upon the points. The wire gauze was of too fine a character, and we found, upon drawing those points, we found that there was plenty of water, even up within four or five feet of the top of the ground, and we found that the vel-um or wire cloth was stopped up with little minute particles of sand, and, upon driving another pipe down with coarser wire cloth, we found that we got the same volume of water that we did formerly from the drive-wells, and we have been changing all of those drive-points as fast as we could, and we are now.

Q. You say as fast as you could. What is there that prevents your changing them all at once?

A. Well, we didn't have the money to make the changes that were necessary; to pay the laborers and to pay for the material.

Q. Suppose that the city uses 250 thousand gallons of water per diem, averages that for a year, and there is a water supply of, say, 350 thousand gallons per diem, did you ever have occasion when for a short time you needed storage capacity in order to meet some sudden demand for a good deal of water for an hour or two hours or three hours, which is larger than the flow for that particular space of time. Do you get my idea?

A. Yes, sir.

Mr. NORRIS: I object to it as immaterial, incompetent, and irrelevant.

The WITNESS: Yes, sir; in case of fire, from the drive-wells we cannot get quite what we want without putting down more drive-wells, and we found that and we started to put the reservoir in for that purpose for supplying that lack, but we have been short of money and we want to pave the basin, but have been unable to do so so far.

236 Q. The character of the soil up there is sand?

A. Yes, sir.

Q. And it leaks?

A. It leaks very badly until it is paved and grouted. It would waste away one-half of the water that we pump in the basin in a day, owing to the character of the material, until it is paved and grouted.

Q. This whole neighborhood here—what is the nature of the soil, the surface soil?

A. Very sandy and dry.

Q. The water has to be artificially held in. The soil itself will not hold it?

A. No, sir.

Q. Let me call your attention again as to the practicability of replacing these pipes or the driven wells, whether you could replace them all at once.

A. We could not do so.

Q. Why not?

A. Because it would emperil our seat of supply. We have to wait an opportunity to get the points in at night and at times when the supply is not needed.

Q. How many at a time?

A. One at a time.

Q. When you take and disconnect a point from the line, the line of pipe into which it runs, will you state what the effect is upon your ability to use that line at all?

A. We could not use it at all.

Q. You cannot use that line at all when you disconnect one point?

A. It takes air and loses the flow of water.

Q. When you do disconnect a single point you have to use the other line?

A. Yes, sir.

Q. When was your attention first called to the stopped-up condition of these points?

A. About three months ago.

Read over to the said witness and by him subscribed in my presence this 25th day of June, 1888.

(Signed) S. L. WILEY.

237 Cross-examination by Mr. NORRIS:

Q. I think you stated you lived at Springfield?

A. No, sir; I did not; Greenfield.

Q. In Massachusetts?

A. Yes, sir.

Q. You are engaged in building water works all over the United States practically?

A. Well, yes, sir.

Q. How much of the time from the construction of the Grand Haven water works were you here?

A. Only at intervals; short intervals.

A. Well, during the progress of the construction of these works how many times were you here?

A. Oh, I couldn't say; probably a dozen times. I frequently came in from the west in the morning and got out at night.

Q. Then your familiarity with the pipe laid is simply what you obtained by these observations taken at these intervals?

A. Yes, sir.

Q. I noticed this morning that you testified from a memorandum?

A. Yes, sir.

Q. Did you make that memorandum?

A. I had that memorandum—I caused that memorandum to be made when the works were built.

Q. Who made it?

A. My engineer.

Q. Then all you know about this pipe laid is what you derive from that memorandum?

A. Practically. When I came here I saw the different sizes being laid on the different streets, but practically I merely know by causing this engineer to make this, and it checks up with the amount of pipe that I sent here from Columbus, Ohio—that is, the different sizes. That is the only check we have on the men, is to
238 make them give us a memorandum of the amount laid and then check it up with the bills that we get from the pipe shipped from the manufacturers.

Q. Then you do not mean to be understood as testifying of your own personal knowledge that there is that amount of pipe laid in streets of the city as a part of the system of the Grand Haven water works?

A. I mean to say I paid for that pipe landing here and I paid the labor—for the help to put it in the ground—for I saw every size of it going in. I saw the pipe all here—the bulk of it lying here—but I didn't see all of it going into the ground; I saw portions of it.

Q. Of your own knowledge you don't known that it did go there?

A. I don't know that every inch of it went there, only that I paid the bills and I know there was hydrants upon the lines of those streets that could not get water unless the pipe was laid.

Q. Without referring to that memorandum can you give the number of feet of pipe on any given street—say on Second street?

A. I would want to refer to my memorandum to refresh my memory upon the subject.

Q. Without your memorandum you could not tell anything about how much pipe there is upon any given street or how much there is altogether?

A. Oh, yes, sir; I could give some streets; the amount of pipe. I had the memorandum made on purpose to keep in mind the amount of pipe we had here.

Q. Whether you know anything about it of your own knowledge or whether it is from the memorandum from which you testify.

A. I consider the memorandum to be by my own knowledge, because I verified that knowledge.

239 Q. How did you verify it? Did you measure it up?

A. I measured portions of this street—portions of this work—to see if it was correct.

Q. You didn't measure it all?

A. I did not.

Q. You say this pipe is all standard pipe. What do you call a standard pipe?

A. A pipe that stands a test of 300 pounds to the square inch and — is the generally accepted weight through the country.

Q. Is there any pipe made for water-works purposes—cast-iron pipe—that is sent out that will stand a test of less than 300 pounds to the square inch? Isn't that the lowest form of pipe they use for water works?

A. No, sir; that is the standard weight; in fact, I never bid upon a work in my life, and I have bid upon two hundred works, probably, and I never bid upon any work that that was not the specific and identical form in each case.

Q. I asked you if that was not about the lowest test pipe they use for water works.

A. No, sir; the lowest test pipe they use for water works is pipe that stands 150 pounds. That is for very light heads. They make it so light as to stand a test of 50 pounds.

Q. Do they use that character of pipe for water works?

A. They do; it is dependent upon the heads.

Q. Can you give an instance where such a pipe is used?

A. I can.

Q. Where?

A. At Athol, Massachusetts. I made a line between two reservoirs where the head was very low, probably not more than

240 20 pounds pressure, and there a six-inch pipe that ordinarily would have weighed from thirty to thirty-three pounds only weighs from 22 to 25 pounds.

Q. Is that character of pipe used all through the works?

A. No, sir; only in specific and indicated places where the pressure is low.

Q. Do you know of any water works that are generally built and pipe lines laid with pipe of less test than this?

A. This is the test all over the country.

Q. Do you know of any water works that are generally built and

pipe lines laid with pipe of less test than this where the system is composed of pipe having a lower test than 300 pounds to the square inch?

A. I don't know of one having a lower or a higher, except it be in specific instances that I have mentioned.

Q. You testified this morning it took about 50 pounds pressure to the square inch to throw a stream of water perpindicular 100 feet from the hydrant; it would be from three to five pounds more for 50 feet, two and a half inch hose. Reduce the pressure at the hydrant, how much pressure do you apply at the pump?

A. It depends upon the size of the mains.

Q. Well, suppose it is an eight-inch main.

A. And what would be the stream taken off?

Q One stream one inch in diameter 100 feet high.

A. It would hardly be computable; you couldn't hardly compute it—the friction.

Q. What I was trying to get at is, what is the required pressure at the pumps to throw a stream of that character?

241 A. If the pumps were the same altitude as the hydrant the same pressure or a trifle in excess at the pumps would give the proper altitude.

Q. How much additional pressure would you have to apply at the pumps for every other stream of that character if one is going and you take out another one?

A. It would depend upon the condition of the mains.

Q. Suppose it was an eight-inch main.

A. Then I couldn't tell you without mathematical calculation how much the additional friction would be, but not a great deal for two streams.

Q. You think about 50 pounds pressure would throw two streams?

A. 52 to 55 pounds would throw a couple of streams.

Q. How much would you have to add for every additional stream that was put on?

A. It would depend, of course, upon the size of your pumps and the size of your mains.

Q. Well, take the water works of the city of Grand Haven, the Grand Haven water works run by the Grand Haven Water Works Company, how much pressure do you have to apply on an eight-inch main, say, in front of this building in order to throw a stream one inch in diameter 100 feet high, 50 feet of hose, two and a half inch hose?

A. I am stating without any absolute knowledge of the altitude of the ground with reference to the pump-house, but I should think it would not vary more than 55 to 60 pounds at the pump.

Q. 55 to 60 pounds at the pump?

A. Yes, sir.

Q. Now, suppose another hydrant was turned on in the same block throwing a similar stream, how much additional pressure at the pump?

242 A. The pressure would not decrease until the friction ap-

plied was sufficient to decrease the flow of water; that is a matter of mathematical calculation only.

Q. That is something you can't tell anything about?

A. I can if you give me a trout line or a haswell; it is a mere mathematical calculation of how much it would require.

Q. Did you ever figure that for these works?

A. I have not, but the probabilities are it would not take more than five or eight pounds.

Q. Five or eight pounds additional pressure?

A. Yes, sir.

Q. Now, does that pressure, that additional pressure, increase with each additional stream that is attached?

A. Of course, you must add if you increase your flow; you must increase your flow to get the same amount of pressure through the pipes.

Mr. UNDERWOOD: He isn't talking about flow; he is talking about pressure.

Q. The question I asked you was: You said for one stream it would take 55 to 60 pounds; for two streams it would probably take five or eight pounds pressure more. Now, does the additional pressure increase with each additional hydrant that is attached?

A. No, sir; you misunderstood me in this or I misunderstood your question. I understood you wanted to know how much additional pressure would be lost in the flow of the water through the mains from the hydrant to the pump-house, because you have only to continue the same amount of pressure at the pump-house, regardless of the number of streams that you put on.

243 Q. Do you mean to say that if 60 pounds pressure at the pump-house will throw—take it in front of this building, the city hall in the city of Grand Haven—if 60 pounds of pressure at the pump-house will throw a stream of water through 50 feet of two and a half inch hose 100 feet high, streams one inch in diameter, 60 pounds pressure at the pump-house will throw in this same vicinity six streams of the same size?

A. Unless you have exhausted that pressure between the hydrant to the pump-house.

Q. That pressure is exhausted as soon as the water begins to move?

A. My proposition in answer to yours was that the pressure would remain the same at both places.

Q. It never does when you are drawing water from one end of a pipe, does it?

A. I stated if you kept the pressure at the same I stated that the loss of friction——

Q. (Interrupting.) I don't ask you to suppose an impossible case; what I want to get at is: Suppose there was a fire here and they turned on one stream and then two streams and so on up to five or six streams, how much will be the increase of pressure at the pump-house?

A. You would have to increase as you increase here?

Q. How much?

A. It is a matter of mathematical calculation; I couldn't tell you.

Q. You haven't calculated it?

A. No, sir; I haven't been over it practically; we might have to run 65 to 75 pounds to get our six streams.

Q. Did you ever see these water works try to throw six streams at the same time?

A. I have not.

244 Q. You don't know, then, whether as a matter of fact they ever did throw six streams simultaneously 100 feet high?

A. Of my own knowledge I don't know anything, except what I have been told. I have seen other works of the same character and same distances that did do it.

Q. How large did you say these drive-wells at the pump-house were?

A. I believe they are two inches in diameter.

Q. What do you know about it?

A. I should say they were; perhaps there is some of them an inch and a half. I made an examination of some of them yesterday.

Q. There may be some of them an inch and a half?

A. Those that I saw were two-inch.

Q. Are you sure that some of them are not an inch and a quarter?

A. Well, I say what I believe to be a fact. I think they are an inch and a half or two inches, and some that I saw were two inches.

Q. You saw some two inches?

A. Yes, sir.

Q. You would not be certain that there are not wells there an inch and a quarter and an inch and a half in diameter?

A. I think there are some an inch and a half.

Q. You don't know whether there was any an inch and a quarter or not?

A. No, sir.

Examination by Mr. SEELEY:

Q. You stated, I believe, that you would not have come here had it not been for that resolution passed by the common council; do you know when that resolution was passed with reference to the time you first came here?

A. Yes, sir.

245 Q. When?

A. Way back to the time when Max Walker attempted to build this work for $5,200 per year. I offered to do it for $1,000 less and the council thought they were getting such a terrible bargain they snapped me up quick.

Q. The resolution was passed a considerable length of time before you came here?

A. About a year, I understood. His time was just about expiring when I came here.

Q. You stated you had an arrangement with the common council. That is an oral arrangement for the purchase of the old works. Did

you at any time submit a written proposition to the city for the purchase of those old works?

A. No, sir; it was verbal.

Q. You never submitted anything in writing?

A. I think not; I wouldn't be positive. I think my proposition might once have taken that in, but I am very positive that it was not in the contract.

Q. How many propositions did you ever submit to the city for the purchase of the old works?

A. I don't think I ever made any unless it was embodied in the general form of proposition that I made to the city.

Q. Upon reflection, what have you to say as to having submitted a proposition to them in writing for the purchase of the old works?

A. Well, I say I don't know, but I did submit a proposition, because we agreed upon the price, I know.

Q. You say that was how much, the price?

A. I will say it was either 25 or $4,500, and I couldn't tell you which. I told them that I didn't consider the works worth a snap.

Q. Wasn't it $5,000?

246 A. I don't think it was. I know we had some haggling about how much we were to give for it, and I told them I didn't consider the works of any value, and they thought they ought to have one year's rent for the works, and how much, just exactly, I couldn't state, but I thought it was $2,500.

Q. The city never entered into any written contract with you for the purchase of the old works?

A. No, sir; I came here into the council and told them I was prepared to substantiate what I told them in the proposition; that we would take the work; that the Wiley Construction Company would keep its word and pay whatever they verbally agreed.

Q. When is the first time you ever announced to the city your readiness to take the old works upon the proposition you have made?

A. Well, sir, I think it was in the fall of 1884.

Q. Before you had completed your own works or after?

A. I think about the time we completed our work.

Q. Do you know when you completed your works?

A. I should think it was some time in October.

Q. Did you complete them at the time stipulated in your written contract?

A. I don't know, sir—oh, no.

Q. An extension was granted you, wasn't there?

A. Yes, sir.

Q. For how long a time?

A. I think two months.

Q. Were your works completed at the expiration of that extension?

A. I don't think they were.

Q. Was your proposition made to take these old works after the two months had expired—this extension time?

A. No; I couldn't exactly say, but about that time.

247 Q. But you are quite positive you didn't agree to give $5,000 for the old works?

A. I wouldn't swear that I didn't; I know we had a great deal of talk about what we would give exactly, and I told them that I would not stand for a little on the old works; that I didn't consider them of any value; that we would give them a year's rent; somewheres near that; I remember that.

Q. I understood you to say that in the location of these hydrants you were accompanied by a committee of the common council; is that correct?

A. Yes, sir.

Q. Do you know who composed that committee?

A. Well, I remember Judge Tate was one of them and I remember Mr. Boyden was another one of them, and I think this man, the clothier down here, went along; I don't know positively.

Q. The clothier, did you say?

A. I think so; he was a member of the counsel at the time. I don't think he was on the committee, but I know we went around in a team; I know we went, among other places, we went to Boyden's mill and located some hydrants there, and we hunted up Mr. Boyden. He could not go with us the first time and we went to the other portion of the city; then we found him and we took in some portion over by his mill then. I think the other man was Mr. Sanford; isn't he a clothier?

Q. I think he was, perhaps, at that time. I understood you to say that at no time have you heard of any complaints about the quality of the water excepting once last summer, and then the water was too warm; warm water?

A. Yes, sir.

Q. That is the only complaint you ever heard?

248 A. That is the only complaint I ever heard.

Q. No other complaints have been reported to you by the persons here in your employ?

A. I don't think they have, sir.

Q. In the supplying of the inhabitants of this city with water do you know, of your own knowledge, of water being taken from Grand river and mixed with the water taken from these drive-wells?

A. I do not.

Q. You don't?

A. No, sir.

Q. Do you know that it has not been done?

A. No, sir; I don't.

Q. Do you know that it was not the custom and has not been the custom during the past two years, especially during the summer months, to do that?

A. I do not, sir.

Q. What is the size of this pond or reservoir you speak of at the pumping-house?

A. About three quarters of a million—600 or 700—gallons.

Q. As to dimensions—in regard to the capacity.

A. Well, I have forgotten what the capacity was. We figured it up at the time, I know. I guess it was about a half an acre.

Q. Exposed to the sun, without any cover over it?

A. Yes, sir; as it ought to be. I never saw one built that was not—for a water works. If you built one for me that had one on I would clean it off quick.

Q. How high do you have to lift your water to get it to your pumps?

249 A. Well, I guess we have to lift about 15 or 16 feet; higher than we ought to lift it. The engineers made a mistake. They found the water in the ground at heads that generally left them so that they will lift about ten feet. They work better at that. They found the water so that they set it just about ten feet, and when they came to actually test it they found that in the drive-wells it drew down so that we are lifting some 14 or 15 feet; dependent upon the difference; they ought to be set at least 6 feet lower, and if we could continue the works we should set them that much lower. It makes the pump labor harder than it ought to. The pump could fulfill the contract with the city of Grand Haven right to-day on the six streams from where the water is. They have got the right capacity to do it, and the boilers, too, but they would be better if they were set six feet lower, and they would use less fuel and less wear and tear, and they ought to have been set lower.

Q. Did you state at what time the works were completed?

A. I told you in the fall of 1884, in October, I should think. I am not exactly positive, but I think in October or November. We found when we come to put the pumps on that the draught of the pumps drew that water to a certain level, and we never have got the water below that level since, and if we had set the pumps five or six feet lower there never would have been a time but what we would have had all the water from the drive-wells that this city could consume.

By Mr. McBRIDE:

Q. Could that make any difference with the city or any of its inhabitants?

A. No, sir.

(Signed) S. L. WILEY.

Read over to the said witness and subscribed in my presence this 25th day of June, 1888.

250 Redirect examination by Mr. UNDERWOOD:

Q. The counsel asked you some questions in regard to the pressure of water and the streams thrown. Now, I thought that you and counsel were at a little misunderstanding about it. If to throw a stream of water 100 feet high in the air takes 50 pounds pressure, to throw two streams does not take double that?

A. Not at all.

Q. It is a question of the same pressure practically, but an increased flow?

A. It is a question of sustaining the pressure, which means an increased flow.

Q. Suppose, or do you know how much water would be thrown by a one-inch stream under pressure sufficient to drive it 100 feet in the air, about how much in an hour?

A. I have forgotten the table of flows.

Q. Suppose it throws eleven thousand gallons?

A. It takes about 250 gallons a minute.

Q. Suppose it takes eleven thousand gallons, for example—that will illustrate it as well as anything—and suppose your pump has a capacity to pump and put through it 66,000 gallons in an hour, which would be the quantity for six fire streams, the pressure would not be any greater any materially greater for the six streams than it was for the one?

A. No, sir.

Q. The only difference it would make in pressure would be the difference in friction on 66,000 gallons through the main and the difference from 11,000 gallons through the main?

A. Yes, sir.

Q. Which would be very slight?

A. Yes, sir; that depends upon the sizes of the mains.

251 Q. It would be different in a four-inch from a twelve-inch?

A. Yes, sir.

Q. If it takes 50 pounds pressure at the hydrant and the difference in elevation between the hydrant and pump-house is not over three or four pounds, and you have got eight or ten or twelve inch mains, what would you expect would be the friction difference between the six streams and one stream?

A. No particular difference except to overcome the friction flow.

Q. A few pounds?

A. Yes, sir.

Q. How many pounds?

A. Perhaps three or four pounds.

Q. The difference in the pressure required at the hydrant from the pump is dependent upon the difference in the altitude of the tube?

A. Yes, sir; and the additional friction flow spoken of.

Q. What is the ratio of pressure in pounds to feet?

A. Well, practically, 45 pounds to the 100 feet.

Q. Give it at one pound pressure, how many feet?

A. It would be 2.3.

Q. If the hydrant was 2.3 feet higher than the pump it would require one pound more pressure at the pump than is required at the hydrant?

A. Yes, sir.

Q. If it was 4.6 higher it would require two pounds more at the pump?

A. Yes, sir.

Q. While if the hydrant was lower by 2.3 feet than the pump you would get one pound more pressure at the hydrant than at the pump?

A. Yes, sir.

252 Q. In getting the pressure required to furnish a stream of a given height at any particular hydrant it depends, in the first place, on altitude?

A. Yes, sir.

—. And then there is a little to be added for the friction?

A. Yes, sir.

Q. Which for one stream is very slight on large mains?

A. Yes, sir.

Q. Then it is a question, when you have three or four or five streams, merely of sustaining the same pressure which you started out with to put through one stream?

A. Yes, sir.

Q. The counsel asked you in regard to the use of heavier or lighter pipe than 300 pounds pressure and you gave an instance where a lighter pipe was used for some special work at Athol.

A. Yes, sir.

Q. And instances of heavier pressure is where there is a very heavy head for a short distance or something of that kind?

A. Yes, sir.

Q. Where there is a heavier standard required?

A. Yes, sir.

Q. 300 pounds is the universal test?

A. Yes, sir.

Q. For what pipe?

A. For cast-iron pipe.

Q. Do you know what the test is for wrought iron?

A. 500—three to five hundred.

Q. Do you know this calumine pipe that is made by the National Tube Works Company?

A. I know it had been tested to 500 pounds to the square inch.

Q. How is it about being one of the strongest wrought-iron pipes?

A. It is one of the strongest wrought-iron pipes made.

253 Q. The counsel asked you about this memorandum made by Mr. Harris and you said you checked it out by measuring at the time, making some measurements of each kind?

A. Yes, sir.

Q. At that time did you also check up that memorandum with your pipe bills?

A. I did, sir.

Q. And know whether the two corresponded?

A. I did, sir. I want to correct my testimony as regards the flow of water through an inch nozzle to 250,000 gallons for 24 hours.

Q. Instead of 250 gallons per minute?

A. It is 250,000 every 24 hours that an inch nozzle flows. It was revolving in my mind, and I want to change it, because that is correct.

Q. You were asked something about testifying from a memorandum by counsel on cross-examination. The only testimony you gave from memorandum this morning or any time to-day was in regard to the length of pipe in the streets here in Grand Haven.

A. That is all, sir.
(Signed) S. L. WILEY.

Read over and subscribed by the witness in my presence this 25th day of June, 1888.

CHAS. H. BENDER,
*Notary Public.*

254 GEORGE VAN PATTEN, being produced as a witness on behalf of the complainant and being duly sworn by the notary, testified as follows:

Direct examination by Mr. UNDERWOOD:

Q. State your name, age, residence, and occupation.
A. My name is George Van Patten; age, 33; watchmaker; Elgin, Illinois.
Q. Did you ever live in Grand Haven?
A. Yes, sir; I did.
Q. When did you come here?
A. I came here the 12th of August, 1884.
Q. When did you leave here?
A. I left in 1885; in September, I think.
Q. September, 1885?
A. Yes, sir.
Q. What was your business while you were here?
A. Well, I was superintendent of the Grand Haven water works.
Q. And during the whole time?
A. Well, hardly; I couldn't say that. Mr. Taylor had charge when I came here and he left shortly after I came; and Mr. Cook was here a short time, and really had charge of the works while he was here.
Q. Do you remember from your own memory what time the works were opened for business here to deliver water?
A. What time the works began running?
Q. Yes, sir.
A. The latter part of September or the fore part of October; I couldn't say exactly.
Q. Have you had any experience in water works before that time?
A. Yes, sir.
Q. Whereabouts?
255 A. A couple of different places: My former home, Oswego, New York State, and also in Appleton, Wisconsin.
Q. Do you remember the occasion of the test or trial of the works in January, 1885?
A. I do, sir.
Q. Do you remember what day of the week it occurred upon?
A. I don't remember. I think it was upon Monday; I am not sure—no; I think it was—I wouldn't say; I guess it was upon Saturday, though.
Q. Do you remember the weather at the time?

A. Yes, sir; I do.

Q. What was it?

A. Well, it was quite cold and windy weather; it was not very pleasant weather for a test.

Q. As to whether it was very cold or not.

A. Well, it was very cold weather.

Q. A good deal of snow or some snow on the ground?

A. Yes, sir; I think there was some snow.

Q. The test was at what time of day?

A. It was in the afternoon, I think about two o'clock; I couldn't say exactly.

Q. Lasting through the afternoon pretty well?

A. Yes, sir.

Q. Where were you during the test, mostly?

A. Well, I was where they were engaged in drawing water from the hydrants, and also at the pump-house; a portion of the time at either place.

Q. Now, at the pump-house, after the test was over, what, if anything, did you discover about either one of the pumps out of the way?

A. I discovered one of them was not throwing only about one-half of her capacity.

Q. Did you take it apart?

A. Yes, sir; I did.

Q. What did you find?

A. I found some chips in the valve, sufficient to not let the
256 pump work only about one-half of what it should.

Q. At the time of the trial or immediately after the trial was over will you state what, if anything, you discovered about the pipe lines here in town?

A. While the trial was in progress somebody told me there was a leak.

Q. Did you go there and see it yourself?

A. Yes, sir.

Q. What did you find? Did you dig down to find it?

A. Yes, sir. I found a pretty large leak; probably three inches long.

Q. What was the occasion of the leak?

A. A joint blown out.

Q. Will you tell whether or not that was the first time that the works had been submitted to severe pressure after they were constructed?

A. No; I think not.

Q. They had been submitted before?

A. Yes, sir; they had been before.

Q. To throwing that amount of water?

A. I can tell by referring to my memorandum book. I don't think at any time we threw. I wouldn't say for sure about that.

Q. Look at your memorandum book if you have one.

A. No, sir.

Q. What do you say now?

A. Not at any time previous to that time.

Q. It had not been subjected to any severe pressure?

A. Well, pressure—yes, sir; but not throwing that amount of water.

Q. That you were upon that occasion?

A. No, sir.

Q. What is your best recollection as to whether before that time you had had any leaks or anything before the test or trial?

257 Q. As to whether I had discovered any leaks?

Q. Yes, sir.

A. Oh, we had discovered a few.

Q. How was it after that time?

A. Well, I don't remember of discovering any great amount of leaks after that time. There was one or two, I think. I cannot remember the name of the street, but I could locate it upon the map. I found a leak afterwards.

Q. Did you take any observations to know what height the streams went upon that occasion when they were throwing it into the air?

A. I could not say definitely how high they went.

Q. You couldn't measure them, but from your judgment.

A. I should think they went about 80 feet high.

Q. When six streams were playing?

A. Yes, sir. I could not see them all at one time, of course.

Q. Do you know what pressure was being maintained at the pumps while those streams were all playing?

A. Well, as far as I was able——

Q. (Interrupting.) You were back and forth to the pump-house?

A. Yes, sir. As far as I was able to observe, the lowest was 73 pounds and the highest 78 with the six streams.

Q. With the pumps maintaining a pressure of 73 pounds—from 73 to 78 pounds—and throwing six streams of water to the height at which they did, if the leak had not occurred—if it had not been for this escape of water at the leak—what do you say as to whether the streams would have gone 100 feet or not?

A. I should judge they would.

Q. Even with the leak in your valve to your pump, if there

258 had not been any chips in, so that both your pumps had worked full, what do you then say about the streams going 100 feet?

A. There is no question in my mind but what they would have gone up to 100 feet.

Q. Do you know what length of hose was being used upon each of the streams, if any?

A. I know they used the length of hose. Whether they used more than one length or not I could not say.

Q. There was at least one length of hose used?

A. Yes, sir; at least one length.

Q. What is the length of a length of hose?

A. 50 feet, ordinarily.

Q. On the day following the test or trial do you remember Mr. McBride, myself, and yourself being at the pump-house?

A. I do.

Q. You had then discovered and cleaned out this valve?

A. Yes, sir.

Q. You had the leak repaired?

A. Yes, sir.

Q. On that occasion what, if anything, did you do to take the place of using six streams of water from hydrants? What did you do?

A. We opened up the hydrant and run the pump.

Q. Opened up the hydrant? What do you mean by that?

A. Took off one cap and opened the hydrant.

Q. What size orifice would that give the water to escape?

A. I think it is about two and a half inches.

Q. How many one-inch streams would one two and a half inch stream be equal to?

A. I think it is about seven; I don't know. I have forgotten exactly.

Q. You say you then ran the pumps?

A. Yes, sir.

259 Q. Do you remember what amount of pressure you were able to keep on the pumps with that two and a half inch orifice open?

A. I don't know whether we made a record of that or not, but I think it was 65 pounds or something like that, but I couldn't say positively.

Q. Where was that hydrant that you took the cap off of and made a two and a half inch orifice—where was that located?

A. West of the pump-house; the first hydrant.

Q. What would be the effect of that hydrant as to the amount of water that would escape from it as compared with one further away from the pump-house—as much or less or more?

A. Do I understand you mean would more water escape from that?

Q. Would more or less water escape from that hydrant by the pump-house than one further away?

A. It would depend upon the one located further away; the elevations, &c.

Q. Suppose the elevation is the same?

A. Probably that one would flow a trifle the most, being the nearest.

Q. On that day, that Sunday, do you remember whether there was a fire or not in town?

A. Yes, sir; there was.

Q. Whereabouts?

A. The Catholic church.

Q. On what street?

A. I think it is Fulton.

Q. Do you know whether or not water from the hydrant of the Grand Haven water works was used at that fire?

A. Yes, sir.

Q. Have you any memorandum of the fire?

A. Yes, sir.
Q. Made at the time?
A. Yes, sir.
Q. If you need it to refresh your memory from you may do so. Tell us how many streams were used.
260 A. I haven't got down the number of streams. They used water for about thirty minutes.
Q. Who used it?
A. The Grand Haven firemen.
Q. When was the next fire at which any water from the Grand Haven water works was used by the Grand Haven firemen? And give us the date, the length of time water was used, and the number of streams, if you can, and go on in reference to your whole stay here until you left.
A. The next fire occurred—it didn't amount to much. It occurred in Mr. Glover's house, situated south from here, but there was plenty of water thrown about; none used particularly on the fire, as it was caused from a defective chimney.
Q. How many streams? What was the date?
A. On February 10th, 1885, at Glover's house, Lafayette street; plenty of water thrown from the Grand Haven water works for 30 minutes, but none on the fire, as it was the burning of a chimney; no damage in particular. February 23rd, 1885, fire on dwelling-house on Third street—Mrs. Kamhout. Water was used from the old works, but I don't think there was any used that evening from the other. They told me——
Q. (Interrupting.) No matter what they told you unless you know about it.
A. Well, I don't know. March 9th, the next fire, dwelling-house on Fulton street between Seventh and Ferry streets; water was used for one hour from the Grand Haven water works; I think they used two streams that evening; they had one stream on at first, and then I think they attached another. March 26th, 1885, fire in Elliott street at one a. m.; started in a blacksmith shop and spread to the adjoining house; burnt a portion of the dwelling-house;
261 four streams were used for one *one* hour and two for two hours from the Grand Haven water works; that is about as near as I can get at these things; that is about as near as I can get them. March 29th, 1885, fire east of the Chicago and West Michigan railroad between Madison and Elliott streets at 11 p. m.; two streams were used for one hour from the Grand Haven water works. April 1, 1885, fire in dwelling-house at 2 a. m. on Monroe street between Fourth and Fifth streets; two streams were used for one hour from the Grand Haven water works. April 12, 1885, fire 9 p. m. in an unoccupied house on Fulton street between First and Second street-; one stream was used from the old works and one from the Grand Haven water works for 30 minutes. April 17, 1885, fire at 3.10 a. m. on Lafayette street in J. Cullen's house, west of Second street; one stream from the old works and one from the Grand Haven water works for 22 minutes. May 7th, 1885, fire on Franklin street, first house east of Andrus house, at 7.50 o'clock; one

stream use- from the Grand Haven water works for 35 minutes. July 4th, 1885, fire in James O'Connell's house, corner of Franklin between Water and First street-, at 8.20 a. m.; one stream was used from the old works and two from the Grand Haven water works for 45 minutes; there is no need of giving the alarms when they didn't use water. July 31, 1885, fire at 8.20 p. m.; fire started at blacksmith shop corner of First and Elliott streets; two streams of water used for 35 minutes from the Grand Haven water works. July 31, 1885, 9 a. m., fire broke out in George Fox'- dwelling-house, on Monroe street between Fourth and Fifth streets; two streams of water were used for 35 minutes from the Grand Haven water works. August
23, 1885, 7.50 a. m., fire broke out in Joseph Douglas' dwell-
262 ing-house, east of the Chicago & West Michigan railroad track
between Fourth and Fifth streets; water was taken from the Grand Haven water works; two streams put on at first; water was then turned off and only one stream was used for 15 minutes. August 26, 1885, fire broke out at 12.50 p. m. at the Detroit, Grand Haven and Milwaukee railroad depot; two lines of hose were used and water was turned on 10 minutas and squirted about, but none used on fire. That is all.

Q. That is, all the while you were here?

A. Yes, sir. There was one or two previ-us to that.

Q. On any occasion when water was needed for fires do you know whether fire pressure was put on at the pump-house?

A. We always put on fire pressure immediately.

Q. What did you carry for domestic pressure here?

A. Well, at that time I think we carried about anywhere from 25 to 40 pounds.

Q. What do you put on for fire pressure?

A. Anywheres from 80 to 100 pounds.

Q. Tell us whether or not at any time you had any complaint from the fire department or any officials of the city of a lack of pressure.

A. No, sir; we never had.

Q. At all of these fires who used this water?

A. Who used the water?

Q. Yes, sir; who used the water?

A. The firemen, through the order of the chief engineer, I suppose.

Q. The firemen were using it?

A. Yes, sir.

Q. In delivering water for domestic service and pumping right along day by day where did you draw the water from?

A. From the driven wells.

263 Q. How did you draw that—by direct suction from the wells themselves or from the main well?

A. We have a main, large well, and the water syphoned in from the driven wells.

Q. While you were here were any new driven wells put down?

A. Yes, sir; there was.

Q. Whereabouts were they?

A. Well, I think they were in a southeasterly direction, as near as I can remember, from the pump-house.

Q. Did you put any down during your superintendance?

A. Yes, sir.

Q. How many were put down?

A. I couldn't tell exactly. I think I put down about 40—something in that neighborhood.

Q. All on one line?

A. No, sir; on two lines.

Q. One line entirely new?

A. One line was entirely new.

Q. Where were the others?

A. The one line that was entirely new ran over towards what they called the old tannery, off in that direction; it is out towards the river—not towards the river, either—down along the river, you might say.

Q. The other wells that you put down that were not entirely new—where were those put?

A. Those are the ones put in a southeasterly direction.

Q. How many of those wells was there in the entirely new line?

A. The entirely new line, I think, was something about 18 or 20, the extension of the old line, and I think there was about 40 in all.

Q. And on the occasion of fires did you have occasion at all to pump from the river?

A. I think there was one or two occasions that we did—that time when the blacksmith shop burned and the dwelling-house; in fact, there were several houses on fire at the time. They used four streams, and I think we drew some water—I know we did, in fact—

264 from the river. I don't remember, but I think we did once after or before that. I couldn't say. I think it was twice that we took water from the river.

Q. You say you think you took some water from the river. Tell us how you drew it.

A. We simply opened the valve to the river—the pipe line running to the river—and what we didn't draw from the well, after getting the well down a certain distance, we took the balance from the river.

Q. So you were drawing from both sources?

A. Yes, sir.

Q. What was the heaviest pull—from the wells or the river?

A. From the wells after they got down to a certain depth.

Q. After you would open the line to the river, when you would open that valve, where would you have the heaviest draft from; which would be the longest suction?

A. The river suction.

Q. And would pull the hardest from there?

A. Well, I don't know; of course, the lift would be the same if the water was the same.

Q. Which was the lowest—the river or driven wells?

A. Oh, the wells were the lowest.

Q. It would be the lowest when you got down to that depth?

A. Yes, sir.

Q. At such times what did you do after the fire was over?

A. Oh, I would flush out the hydrants when we drew any river water.

Q. How long would it take you?

A. Oh, a short time. We would have to locate about how far that water got. If we used water an hour or so we would have to test our hydrants along; commence at this end and work back until we caught the water and then draw it off.

Q. While you were here will you tell us whether at any time you had any complaint from any water consumer that you were
265 furnishing him bad water.

A. Oh, I have had such complaints when we were not furnishing bad water. There never was, as I said before, but one or two occasions when we had to pump river water into the mains. There was three, I think. One time there was a joint broke on one of our driven wells and the man didn't notify me and I was not at the office, and I had to take some water from the river. I found it out, though. One of my consumers came to me and commenced talking about it and I told him I guessed not. I found it out and I remedied it.

Q. That was in the case of an accident to the other lines?

A. Yes, sir.

Q. To the line of wells?

A. Yes, sir.

Q. What do you say as to the fact of the water which you delivered through the mains to your consumers during the whole time that you were here being wholesome and not deletarious to health?

A. Oh, it was good water. That is what everybody said.

Q. What do you say as to the practice of flushing out your mains now and then, even when you had not used any river water?

A. I find it a very good thing, especially upon dead ends where there is not a circuit?

Q. Was that your practice?

A. Oh, yes, sir.

Q. Will you state to us any time that you can remember of, if there was any, when there was any alarm of fire that called for water that you did not give fire pressure while you were here?

A. Never while I was here. We always had fire pressure.

Q. Was there ever any complaint made to you while you were here of a lack of sufficiency of water for any purpose—a lack
266 of enough water for any purpose?

A. There was no complaint of that kind made to my knowledge.

Q. What was the date of that fire at the Catholic church—the first one you mentioned?

A. I think it was on the 19th of January.

Q. January, 1885?

A. It was January 18, 1885.

Q. The test or trial had been the day previous?

A. I think so.

Q. Do you remember whether at that test the members of the counsel were present?

A. They were.

Q. Who had charge of the hose, the management of the test?

A. Well, there were, I believe, all firemen; I think the most of them were firemen; I am not sure; there might have been some that were not firemen, but I think they all were.

Mr. UNDERWOOD: I ask counsel on the other side if they have in their possession and can produce, and if so I wish they would produce it to-morrow morning, a letter dated Grand Haven, January 17th, 1885, addressed to Alderman Safford and signed the Grand Haven water works, by George Van Patten, superintendent. It is a letter requesting, in case the committee are adverse to making another test of the works, that they will loan the company sufficient hose, six lengths of hose of 50 feet each, with which to make a test.

Q. I will ask you if you have any memorandum by which you can determine what day of the month that test was.

A. Yes, sir; I think it was on the 15th of January.

Q. 1885?

A. 1885; yes, sir.

Q. I now call your attention to the proceedings of the council as set forth in the answer of paragraph 13 of a meeting held on
267 January 17, 1885, where the water works company presented a communication asking for a further test of the water works and suggested next Monday, January 19th, at 10 o'clock in the forenoon, as the time for such test, and, on motion of Alderman Brouwer, the matter was referred to a special committee. After that reference of the communication of the water works asking for a further test do you remember of handing Alderman Safford a letter?

A. I do.

Q. Look at this paper that I now hand you and see if that is a copy of the letter which you handed to Alderman Safford.

A. It is.

(Paper referred to marked Exhibit Number 7.)

Mr. NORRIS: I object to that on the ground that there is better evidence.

Q. The memorandum on this paper is: "Serve a paper, of which the within is a true copy, on Alderman Safford, at Van Der Veen's drug store, on the evening of January 17th, 1885.—George Van Patten." That is simply a memorandum on there to identify the paper?

A. Yes, sir.

Q. What did you do the fore part of the following week in regard to getting the hose that was requested by that letter?

A. Well, as near as I can remember, they refused to let us have it.

Q. Who did you see?

A. I think it was Mr. Safford.

Q. And do you remember what he did?

Mr. NORRIS: I object to the witness testifying as to any conversation with Alderman Safford. It does not apperr that Alderman Safford had any authority to act in regard to the matter.

268 A. As near as I can remember, he said something about that he would have to confer with the rest of the committee; something to that effect.

Q. Did you see him again after he had conferred with the rest of the committee?

A. I think I did. I think he said something about it, that they had had sufficient, or something about it. I don't just remember what it was.

Mr. NORRIS: I object to any conversation with Alderman Safford or what Alderman Safford said to him.

The WITNESS: I think he concluded not to have any further tests or let the hose go.

Q. After this time and in the course of the next week, the week following this January 17th, do you remember any further trial of the works that was made in the presence of anybody?

A. Yes, sir. We had a further trial in the presence of Mr. Stark. I think that is the gentleman's name, and the inspector's name I don't remember.

Q. Mr. Cowan?

A. Mr. Cowan, I think that is the gentleman's name, and also tested the gauges.

Q. Mr. Cowan was an inspector of what?

A. He was a Government inspector, I think.

Q. Government boiler inspector?

A. Yes, sir.

Q. Just tell what was done?

A. Well, we went to the pumping station, I think, first and examined the gauges to see if they were all right.

Mr. NORRIS: I object to all of this as immaterial. The parties were not acting for the city.

The WITNESS: We then tested our pressure.

269 Q. How did you test it?

A. By opening hydrants and taking off one of the caps.

Q. Water or steam pressure?

A. I think we tested both.

Q. You opened the hydrant and took off one cap?

A. Yes, sir; and run our pumps up; I think we run up to 65 pounds or such a matter with one plug open; we put the gauge on the hydrant.

Q. You put a gauge on the hydrant. Tell how you did that?

A. We had a false cap or duplicate to fit onto the plug to attach the gauge so as to determine the difference, if any, between the pump and the hydrant, the pressure, and there was no material difference.

Q. The hydrant that you put it on—it would be put where on the hydrant?

A. It would be screwed onto the other plug.

Q. When you speak of the other plug, what other plug do you mean?

A. We had one open and the other we screwed a cap on with a gauge attached to it. Of course, there was a trifling fluctuation of the gauge backwards and forth of maybe a pound; I don't think more than that.

Q. I asked you this forenoon if you could tell what time you commenced to supply water here at Grand Haven, and you thought you could if you saw the application. Will you look at this book and tell me if you know what book that is?

A. This is the Grand Haven water works application book.

Q. While you were here who kept it?

A. I did.

Q. In whose handwriting while you were superintendent are the blanks filled in?

A. Sometimes my wife did it and sometimes I did it.

270 Q. When your wife did it was it under your direction?

A. Yes, sir.

Q. By looking at that book can you tell the date of the first application? By looking at that book are you able to remember the date of the first application?

A. No; not exactly. These people who first applied for water had water some time before it was charged up to them.

Q. Before the formal application was made?

A. Yes, sir; on account that we were not keeping the pressure on steadily. For a few days we made no charge of that, until we commenced pumping regularly every day.

Q. Can you tell by looking at that book—can you approximately tell—the date when you did commence pumping regularly?

A. Not very well.

Q. I don't mean exactly, but approximately can you tell the date?

A. I think we commenced pumping about October 1st.

Q. Regularly?

A. Yes, sir. It might have been a few days after that.

Q. 1884?

A. 1884.

Q. By looking at that book can you tell the number of consumers who had been taken onto the mains of the water works company at the time that you left?

A. Yes, sir; I think I can.

Q. Can you tell up to the time of the test on January 15th?

A. Yes, sir.

Q. Will you tell us how many had been taken on?

A. No, sir; I cannot tell unless I look the book through, and that would take too much time, because there was some made appli-

271 cation for water and they didn't commence using it for a long time afterwards, and of course those applications are not dated, only from the time they commenced using it, so that they are in different parts of the book.

Q. Can you tell how many were using water at the time of the test of January 15th?

A. I can tell very nearly.

Q. Tell as near as you can.

A. There was about 47; there might have been one or two or maybe three or four more in the book in different places; probably I can find it if I take time to look it up.

Q. Can you tell how many were using water at the time when you went away?

A. Yes, sir; I can tell very nearly; I think there was about 128. I can tell very nearly by looking in the book, though. (Witness examines book.) 123, as near as I can determine from this.

Q. At the time of the test that you have spoken of on January 15th, do you know whether either one of the pumps ran faster than the other?

A. Oh, yes, sir; one did.

Q. Which one was that?

A. Well, it was the one, I should call it, on the north side; I think it is towards the river.

Q. They became disconnected?

A. Yes, sir.

Q. How much faster than the other one did it run?

A. Well, I couldn't say; considerable.

Q. Were you able to account for it?

A. I was afterwards.

Q. How?

A. By the valves being stopped up with chips.

Q. What effect did that have upon the pump?

A. It would not draw the water, and consequently the steam pressure would make the pump run faster. It was not drawing the same amount of water that the other side was.

272 Q. Do you know how many revolutions the other pump made to the minute?

A. I don't remember, sir.

Q. Do you know how many revolutions they were calculated to make—the pumps—how many they could make?

A. I don't know how many they could make.

Q. Have you any recollection of how many you have seen them make?

A. Oh, yes, sir.

Q. The highest speed that you have seen.

A. Oh, I have run them up to 100—yes, sir; I have run them up to 120.

Q. Can you tell whether on the day of the test or trial the south pump, the one which was not blocked up, was running as fast as that 120?

A. I couldn't say; it was running very fast; how fast I don't know.

Q. You speak of so many revolutions, 120; you mean 120 a minute?

A. Yes, sir.

Q. Do you know what the capacity of delivery of each pump was to every revolution?

A. I did know, but I don't know now.

Q. When you speak of the leak that occurred on the day of the trial you said it was about three inches, and that the joint came out?

A. Yes, sir.

Q. What was the joint made of?

A. Lead.

Q. How large a space did that leave where the lead came out for the water to come through?

A. Pretty nearly a half an inch opening.

Q. In width?

A. Yes, sir.

Q. And three inches long?

A. Yes, sir.

(Signed) GEORGE VAN PATTEN.

Read over and subscribed in my presence this 25th day of June, 1888.

—— ——.

273 Cross-examination by Mr. SEELEY:

Q. Whereabouts was it on the line of this pipe that this leak occurred that you spoke of on the day of the test?

A. It was on Seventh street, I think.

Q. When was it you first discovered this leak with reference to the beginning of the test?

A. There was somebody came to me, I don't know who, and notified me while we were engaged in having the test.

Q. Was it near the close or about the middle of the test?

A. Well, it was near the close of the test.

Q. Did you go at once to look at it?

A. I think I was then on my way to the pump station.

Q. How long did that test continue on that occasion?

A. I couldn't say for certain; it was along towards evening.

Q. What time of day was it you commenced your test?

A. I think about two o'clock; it might have been a little later.

Q. Have you any knowledge as to when that break or leakage occurred?

A. No; I have not.

Q. So you are not able to state whether that leakage or breakage occurred along the fore part of the test or the latter part, are you?

A. No, sir; I am not.

Q. Did you ever call the attention of any person belonging to the council at that time, or in authority in this city, to that leakage?

A. I think I did afterwards.

Q. Are you positive that you did?

A. Quite sure that I did.

Q. Will you swear that you did?

A. Well, I am quite sure that I did.

274 Q. Will you swear that you did? What is your answer?

A. Well, I don't want to swear to anything that is not so, but I am quite sure I did.

Q. That is the degree and extent?

A. To the best of my knowledge I think I did.

Q. There were various persons who were connected with the city government at that time that you were acquainted with, were there not? In fact you were acquainted with all the persons connected with the city government at that time?

A. I knew them.

Q. Some of those persons were going to and fro from this place here up to your engine-house during this test?

A. Yes, sir.

Q. This leakage occurred in the main-travelled road where they would go to the pump-house?

A. No, sir; it was right in front of Mr. Bell's house.

Q. From this street where the hydrants were being used, Frankling street, it was on Franklin street, at the junction of Franklin and Seventh?

A. It was on Seventh street between Franklin and the next street south.

Q. When you got there was there a pool of water over the main, where this leakage occurred?

A. Oh, yes, sir.

Q. A large pool?

A. A very large pool—that is, not very large, not over the main, as I remember it. There is quite a deep ditch side of the road and the water ran eff in this ditch.

Q. Do you remember whether there was a meeting of the common council on the evening of that test?

A. Yes, sir.

Q. Did you say anything at that meeting about this leakage?

275 A. I don't know whether I did or not.

Q. Did you tell the chief of the fire department—you know who he was at that time?

A. Yes, sir.

Q. Did you tell him on the day of the test about this leakage?

A. I don't think I did.

Q. Did you ever tell him about this leakage?

A. I think I did.

Q. At what time?

A. I couldn't tell you.

Q. About the time of the test did you tell him?

A. I don't know whether I did or not.

Q. Now, you say that you discovered at some time some chips in the valve?

A. Yes, sir.

Q. When was it that you made this discovery?

A. Well, I knew that they were the-e that evening—that is, I knew there was something the matter with the water end of the pump.

Q. You didn't know what the matter was, did you?
A. That evening or the next morning?
Q. Did you that evening after the test know what the matter was?
A. I think I did.
Q. You were here at a meeting of the common council that evening after the test, weren't you?
A. I think I was.
Q. Did you tell the members of this council or of the city government that you had found chips in the valve?
A. I don't think I did.
Q. Did you tell them the next day that you had found chips in the valve?
A. I don't know whether I did or not.
Q. Do you know that you ever told them that you had found chips in the valve?
A. I think I mentioned it to them.
276 Q. When?
A. I couldn't say when. I told you before.
Q. Who did you mention it to?
A. I must have told them.
Q. Is that the only r-ason that you can give that you must have told them?
A. We desired to have another test.
Q. I am asking you now whether you know that you ever told this council at that time or any member of the city government that you had found chips in the valve at that time or within a very few days thereafter.
A. Well, I told you before I thought I had told somebody.
Q. You say you delivered a letter to Major Safford, Alderman Safford?
A. Yes, sir.
Q. Do you know how you addressed him in the letter?
A. Well, I think I addressed him as Alderman Safford.
Q. Do you know what committee he was on and what position he occupied upon committees at that time?
A. Well, as I understood it at that time, I think he was on the committee who would have charge of such things as that.
Q. Now, then, the evening that you served this letter upon him was the evening of the meeting of the common council, wasn't it?
A. Yes, sir; I think it was.
Q. Was it before the meeting of the common council or after the meeting of the council that you served it upon him?
A. I think it was after, but I am not sure.
Q. Why did you defer serving it upon him until after the meeting of the council; can you give any reason or explanation of that?
A. No, sir; I cannot.
Q. You say you served it upon him in the store of Mr.
277 Van Der Veen, in this city?
A. Yes, sir.
Q. And this letter, Exhibit 7, you swear is an exact copy of the letter which you served upon him, do you?

A. To the best of my knowledge.

Q. Do you remember who wrote the letter that you served upon him; in whose handwriting it was?

A. Yes, sir.

Q. Whose?

A. Mr. Underwood's.

Q. And the copy was made in whose handwriting?

A. Mr. Underwood's.

Q. Do you know where the letters were written, the original and the copy?

A. In the Cutler house.

Q. At what time?

A. I couldn't say.

Q. In the daytime or in the evening?

A. I think it was in the evening.

Q. Before or after this meeting of the common council?

A. I couldn't say.

Q. Now, you say you did discover some chips in the valve?

A. Yes, sir; a number of them.

Q. When is the first time you made that discovery?

A. Well, I am not sure, but I think it was the evening of this test.

Q. What was the effect of these chips upon the pumps?

A. The effect would be to stop the flow of water to the pumps.

Q. The test, I understand you to say, did not close until dark?

A. Well, it was along towards evening; yes, sir.

Q. What did you do immediately after the test closed?

A. I think I went home and got my supper.

Q. What did you do then?

A. I think I went to the pump-house. I am not sure.

278 Q. You are not positive of that?

A. No, sir.

Q. What time did you have your supper?

A. I couldn't tell you; early in the evening.

Q. Didn't you go to the Cutler house with Mr. Underwood and come with him to the common-council meeting that night?

A. I think we came to the common-council meeting.

Q. Together?

A. I think we did.

Q. Didn't you come from the Cutler house?

A. I think we did.

Q. Didn't you go from your supper to the Cutler house? Where were you boarding at that time?

A. At home?

Q. Didn't you go from your home after supper to the Cutler house?

A. I don't know; I couldn't say for certain.

Q. Now, then, if this test closed at dark and then you went to the Cutler house with Mr. Underwood and came with him from there to the council meeting, how could you examine the pump and find the chips in that night?

A. I could examine it later in the evening.

Q. Did you go from here to the pump-house that night?

A. No, sir; I didn't.

Q. If you didn't, how could you have examined it later in the evening? If you didn't go from here to the pump-house, how could you have examined the pump later in the evening?

A. Well, I am not sure about it; I told you before I couldn't tell exactly.

Q. Now, will you swear you examined the pumps the next morning and found the chips in it?

A. It was either that evening or the next morning.

Q. The next morning?

A. Yes, sir.

Q. Who was present when you made this discovery?

A. The engineer.

279 Q. What was his name?

A. Douglass.

Q. He is not here, is he?

A. I don't know.

Q. Was there anybody else present?

A. I don't think there was; there might have been. People were going and coming there all the time.

Q. Now, I understand you to say that this leakage was caused by the lead coming out where the joints were fastened together.

A. Yes, sir.

Q. How long was that leakage?

A. About three inches long, as near as I can remember.

Q. How wide?

A. About half an inch or thereabouts; it might not be quite as much as that.

Q. Would that leakage, a leakage of that dimension, materially impair pressure of the water?

A. Yes, sir; it would.

Q. What was the size of the nozzles used there on the occasion of that test—the tips?

A. One inch.

Q. Do you know that they were but one inch?

A. Well, to the best of my knowledge.

Q. Do you know that they were only seven-eighths and one-sixteenth, and not a full inch?

A. I don't know; I supposed they were one inch.

Q. It is supposition you are testifying about when you testify as to their size, isn't it?

A. Yes, sir.

Q. You don't know accurately?

A. No, sir.

Q. Who furnished those tips for that occasion?

A. Mr. Wiley.

Q. You borrowed some hose from the boys down stairs, didn't you—some lengths of hose—to be used on the occasion of that test?

A. The hose was from this department.

280 Q. You borrowed them down there yourself, didn't you?

A. I don't remember.

Q. Don't you know that you did?

A. Why, I don't remember that I did.

Q. Don't you remember that you went to Mr. Holmes and asked him if he would let you take them?

A. Probably I did.

Q. Do you mean te be understood as swearing that the fire department of this city assisted you upon that test upon that occasion?

A. They did assist us.

Q. The fire department assisted you?

A. The men who belonged to the fire department.

Q. Then you don't mean to say that the fire department as a fire department of this city assisted you, do you?

A. Well, I don't know what you would call it, I am sure.

Q. What you mean to be understood as saying is that individuals belonging to the fire department of this city assisted you upon that occasion, isn't that it?

A. I mean to say those individuals that belonged to the fire department held the pipes attached to the hose.

Q. You asked them to do it, didn't you?

A. We asked the council to have a test that day.

Q. You asked the firemen to do it, didn't you?

A. I don't remember.

Q. Do you know that you did not?

A. No, sir.

Q. Now, you say that members of the council were present at that test?

A. Yes, sir.

Q. Do you mean to say that the common council as a body

281 in its corporate capacity were present at that test that day?

A. I mean to say that members of the council were present at that test that day.

Q. Do you know whether all of the members of the council were present?

A. I think not.

Q. Do you know who the persons were and what their official position on the council was who were present on that occasion?

A. I could not say exactly.

Q. Did they assist you—these aldermen and persons who were aldermen—did they assist you on that occasion?

A. They viewed the test.

Q. And there were a great many other people that viewed the test, too, weren't there?

A. Yes, sir.

Q. Then they did no more than other people, did they?

A. Yes, sir.

Q. What did they do more than other people?

A. They went to and from the pump-house.

Q. Didn't other people go to and from the pump-house, too?
A. Not as they did.
Q. In what respect was there a difference?
A. They went in there and viewed the pumps working.
Q. Don't you know that other persons went there and viewed the pumps working, too?
A. Not as they did.
Q. How different did other people do it?
A. I don't know; we took the aldermen out there.
Q. Who took them out there?
A. We did.
Q. On the day of the test?
A. Some of them.
Q. As individuals?
A. As aldermen of the city.
282 Q. Now, you say you threw streams upon that occasion how high?
A. I didn't say how high.
Q. About how high?
A. About 80 feet, I should judge, as near as I can tell.
Q. You didn't use any instrument nor resort to any means for measuring, did you?
A. I didn't; no, sir.
Q. It was simply your own judgment?
A. That is all.
Q. There were other streams being thrown at that time from the city water works, weren't there?
A. Not to my recollection.
Q. Don't you remember of seeing streams being thrown from the city water works upon that occasion?
A. No, sir; I didn't.
Q. You don't remember that?
A. No, sir.
Q. You swore that it was windy on the day of that test, did you?
A. Yes, sir; it was quite windy.
Q. And that afternoon?
A. Yes, sir.
Q. Did you make any memorandum of the fact that it was windy upon that day?
A. No, sir; I didn't.
Q. That is simply your recollection?
A. Yes, sir; that is as I recollect it.
Q. I understand you to say that on not to exceed three occasions did you ever connect with the river during the year 1885?
A. I said I thought we didn't.
Q. Not to exceed three times?
A. No, sir.
Q. How many fires were there in the year 1885?
A. I don't know.
Q. About how many?

A. I couldn't say; I could tell by looking at a memorandum?
Q. You have some opinion as to the number?
A. No, sir.
283 Q. Weren't there 15 or 20 fires in 1885?
A. No; I think not.
Q. Were there a dozen?
A. I guess so.
Q. More than a dozen?
A. I don't know but there were.
Q. Wasn't it your practice in the case of a fire to always make connection with the river?
A. No, sir.
Q. It was not?
A. No, sir.
Q. And don't you know that almost universally after every fire in the year 1885 the water coming from your pipes was dirty, unclean water?
A. No, sir.
Q. You don't know it?
A. No, sir; it was not.
Q. You swear that it was not?
A. I do.

Examination by Mr. NORRIS:

Q. When these works started up how many of these drive-wells were there?
A. I don't know exactly how many there were.
Q. What was the size of those that there were?
A. An inch and a half and two inches.
Q. How much was the daily capacity of those wells at the time you started up?
A. Well, I tested them at different times and would throw two good streams.
Q. How many gallons a day?
A. Well, I don't know how many gallons a day they would flow; they flowed pretty well.
Q. What was the size of the streams?
A. Oh, inch streams.
Q. They would throw two-inch streams?
A. Yes, sir.
Q. And keep that up steady?
A. Yes, sir; I guess they would.
Q. Well, how long did you ever try them?
A. Oh, tried them an hour at a time.
284 Q. You have had them throw two-inch streams an hour at a time?
A. Yes, sir.
Q. Is that the most water you ever got out of them?
A. Oh, I don't know exactly as to that; I am not able to say; I know I throwed them a great many times; we had a couple of links of hose up there. and we would try it awhile at different times.

Q. Did you ever know them to throw more than two-inch streams?

A. Oh, I have had on two-inch streams and then opened up besides.

Q. Opened up what?

A. Another inch stream that we had inside of the building.

Q. Well, how lo-g did they keep up that flow?

A. Well, I don't know; I never tested them long enough to find out; probably an hour or such a matter at a time.

Q. Then you cannot tell what the capacity of the wells were when you started out?

A. No, sir.

Q. Now, on these occasions when you say you opened up the river pipe and pumped water from the river, how long had you pumped on the wells then?

A. Oh, sometimes it would be an hour and sometimes less, and I believe once less than an hour; it might have been twice.

Q. You say once you pumped less than an hour and then your wells got so low you had to open up the river?

A. Yes, sir.

Q. When was that?

A. Well, it was a fire that occurred in the blacksmith shop.

Q. How many streams were there on then?

A. Four streams.

Q. Now, what is the average distance you have to pump from the wells; what is the lift of the water?

A. Oh, I don't know; I never measured it.

285 Q. What is the size of the inlet pipe from the wells to the pump?

A. I couldn't say positively.

Q. What is your judgment?

A. It may be 10 inches and it may be 12.

Q. What is the size of the inlet pipe from the rivrr to the pump?

A. It is 12-inch.

Q. What is the distance of the lift when the valve into the river is open, from the river to the pump?

A. That I don't know.

Q. Is it more or less than that from the well?

A. Well, it depends upon how low the water is drawn from the well. We can draw lower from the well than we can from the river.

Q. How low can you draw the wells?

A. Well, you can draw down, pretty well down towards the bottom of the suction pipe.

Q. How much pumping would it take to do that?

A. Well, I don't know; as I said before, we had two streams on for an hour or such a matter at a time, and drawed it down part way, and then it would stand about there.

Q. I think you stated on your direct examination that the water flowing under a given pressure from an orifice two and a half inches in diameter would be equal to about seven times the amount of

water flowing from an inch orifice under the same pressure. Did I understand you right?

A. I said that a two and a half inch orifice, I thought, would be equal to about seven streams.

Q. One inch in diameter?

A. Yes, sir.

Q. How do you figure that out?

A. Well, I have a system of figures.

286 Q. I want to know how.

A. Well, the only thing I have to go by—the only thing I ever did go by was a book that treated on those things.

Q. You don't know, then, anything except what you get out of a book?

A. No, sir.

Q. You cannot swear of your own knowledge that that is a fact?

A. No, sir.

Q. Do you know what the area of an orifice two and a half inches in diameter is?

A. No, sir.

Q. Do you know what the area of an orifice an inch in diameter is?

A. No, sir.

Q. You could not compare the two, then? These works did not run any length of time without customers, did they?

A. No, sir; they did not.

Q. They had customers when they first started out?

A. Yes, sir.

Q. Did you make any connection with the river at the time of this test that has been spoken of?

A. No, sir; I didn't.

Q. Who did?

A. The engineer.

Q. The engineer opened the river?

A. I think he did. I say I didn't. I am not sure whether I did or not.

Q. Connection was made with the river at that test, wasn't there?

A. Yes, sir.

Q. How long had the pumps been working on this test before the river cock was opened?

A. I couldn't say exactly.

Q. You don't know?

A. No, sir; I didn't keep track of the time. I think it was in the neighborhood, though, of a half an hour.

Q. From that time on until the end of the test the river cock was open and the pumps were pumping from the river?

287 A. I think they were; yes, sir.

Q. How many additional wells have you added to the original line of drive-wells that was there when you started?

A. I think I added in the neighborhood of 40.

Q. You added 40 to the original line and there are two lines of drive-wells, aren't there?

A. I added 40 in all, the new line and additions to the old.
Q. You started out with one line that runs to the southwest?
A. Yes, sir.
Q. You say you don't know how many wells there were on there when you first started?
A. No, sir; I don't.
Q. How many did you add to that during your superintendency?
A. I don't know that.
Q. You can't tell?
A. No, sir.
Q. How many did you put on the other line?
A. I think I put 18.
Q. 18 on the other line?
A. I think so.
Q. You put down about 40 in all?
A. Yes, sir.
Q. You don't know how much water is obtained daily from either of those lines, do you?
A. No, sir.

(Signed) GEORGE VAN PATTEN.

Read over and subscribed by the witness in my presence this 25th day of June, 1888.

288 Redirect examination by Mr. UNDERWOOD:

Q. When Mr. Seley was examining you he asked you a good many questions in regard to whether you notified any alderman or any member of the city government in regard to the leak at any time near the time of that test. I call your attention to this copy of the letter which was written on January 17th, with this sentence in it: "It is perhaps right to further inform the committee that during the test on Thursday a leak occurred of considerable extent in the piping, which used considerable water and which has been thoroughly repaired." Does that recall to your mind the fact that you had notified the committee?
A. Yes, sir; it does. I didn't want to say for certain, as I had partially forgotten.
Q. Is your recollection clear about where you were on the evening of the day of the test and what you did?
A. Well, as near as I can remember, as I said before, I think I went to the pump-house that evening. I was also down here to the meeting and, I think, after the meeting I served a notice upon Mr. Safford and, I think, I went to the pump-house after that.
Q. In serving the notice upon Mr. Safford that you did you acted under my directions?
A. Yes, sir.
Q. Do you remember of any talk at all that evening either between myself and the committee or members of the council or yourself and the members of the council in regard to the chips in the

valve or on the evening of the following meeting, either one of those meetings?

A. I couldn't say positively. I know that I talked with you about it, but whether I did—I think I told some of the aldermen about it. I must have done so.

289 Q. Can you remember the fact whether at either one of those meetings it was a matter of conversation here in the room in regard to the chips in that valve?

A. I think Mr. Emlaw talked about it. I am quite sure he did.

Q. Who is Mr. Emlaw?

A. He was alderman at that time; he sits right behind you now.

Q. In regard to the test that was being made and at the time it was made, on the 15th of January, do you know who located the hydrants and picked out the hydrants where the test should be made from?

A. No, sir; I don't. I know I did not.

Q. Do you know how the hose was gotten there?

A. No; I don't.

Q. You don't know about that?

A. No, sir.

Q. Do you remember where the council met, if at any place, and where the start was made from?

A. The council met at this building here, as near as I can recall.

Q. Do you remember how many went to the pump-house or stayed at the pump-house?

A. I think Alderman Emlaw and Alderman Brouwer and Alderman Blicker or Blocker—I am not sure—and Alderman Blicker or Blocker, whatever his name is, was there. I don't remember who the other one was that was there, but I think it was Mr. Brouwer.

Q. You said the nozzles were provided by Mr. Wiley—sent here by Mr. Wiley.

A. I think so.

Q. Will you state whether any of your men or employees in any way, shape, or manner had anything to do with the test; and, if so, what?

A. I don't think they did have.

Q. Your engineer was at work at the pumps?

A. Yes, sir; of course.

290 Q. Who, if any one, directed when the pressure should be let down at the pump-house; do you know?

A. I don't remember; I think some of the council told me when they had through and I notified them from this telephone below in the building.

Q. Do you know whether the council wore any robes or badges to designate whether they were in their corporate capacity or individual capacity?

A. I don't know as they did.

Q. There wasn't any way that you could tell from their appearance whether they were acting in their corporate capacity or individual capacity?

A. No, sir.

Q. No extra assumption of dignity so that you could tell whether they were acting in their corporate capacity or not?
A. No, sir.
Q. They wore no label or anything of that kind?
A. No, sir.
Q. You have no means of distinguishing an alderman when he is acting in his corporate capacity and when he is acting in his individual capacity?
A. No, sir.
(Signed) GEORGE VAN PATTEN.

Read over to the said witness and by him subscribed in my presence this 25th day of June, 1888.

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291 Recross-examination by Mr. SEELEY:

Q. What do you mean when you say common council? What do you mean by that term?
A. I should have said city council, probably.
Q. What do you mean when you say city council?
A. Well, isn't the board of aldermen considered the city council?
Q. I ask you what you meant when you say that.
A. I meant the aldermen of this city. That is what I had reference to.
Q. Do you mean to be understood as saying that a meeting of the common council was held here at this place previous to the commencement of that test upon that day?
A. No, sir; I didn't say so.
Q. When you say that the council met at this building before going down there you made a mistake, did you?
A. I presume so. I probably should have said the aldermen met at this building.
Q. Do you mean to say that all of the aldermen met here?
A. No, sir.
Q. Do you know how many did meet here?
A. I couldn't say positively.
Q. Do you know how many aldermen were at the pump-house?
A. I think there was two or more.
Q. What are their names?
A. Alderman Blicker or Blocker and Brouwer. I think those were the two.
Q. Do you think of anybody else?
A. I don't know whether there was any others there or not. I couldn't say positively.
Q. Now, you said something about being notified to shut down. Who notified the engineer to shut down after that test?
A. I think I did.
292 Q. Were you directed by any person who belonged to the city government at that time to shut down?
A. I, of course, inquired if they had through from some one I don't remember.

Q. You don't remember who it was?
A. I know it was one of the aldermen.
Q. What did he say?
A. He said they had through, or something to that effect.
Q. What did you say to him?
A. I couldn't say.
Q. He said what?
A. That they had all through.
Q. They had all through?
A. Or something to that effect.
Q. What was the date of that first application you spoke of there?
A. October 15, 1884.
Q. Is that first application dated October 15th?
A. Yes, sir.

By Mr. NORRIS:

Q. What is the matter with November 21st, along over the head of it? It is dated Grand Haven, November 21st, isn't it?
A. That has nothing to do with this here. This is the time we collect from.
Q. What is the date, November 21st?
A. The heading is dated November 21st.
Q. Is the date on the contract signed by the applicant, isn't it?
A. No; I think I filled this out afterwards. I must have done so. I did do so quite often. This man was using this water before this time. I dated this — just go by this for collecting; to collect from that time, and charged it up to him from that time.
Q. The heading on the application is November 21st, isn't it?
A. Yes, sir.

(Signed) GEORGE VAN PATTEN.

Read over to the said witness and by him subscribed in my presence this 25th day of June, 1888.

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293 JUNE 26TH, 1888.

AUGUSTUS M. COSGROVE, being produced as a witness on behalf of the complainant and being duly sworn, testified as follows:

Direct examination by Mr. HOWELL:

Q. Where do you reside?
A. I reside in Grand Haven.
Q. What is your occupation?
A. Superintendent of the Grand Haven water works.
Q. What is your age?
A. 32.
Q. Have you ever been engaged in the water-works business or connected with any water works before you were with the Grand Haven works?
A. Yes, sir.

Q. You may state when and where.
A. In 1884, in Adrian, Michigan.
Q. With the Adrian water works?
A. Yes, sir; and also in 1884, in Richmond, Indiana.
Q. The water works company there?
A. Yes, sir.
Q. Anywhere else?
A. In 1885, in Niles, Michigan.
Q. Any other places?
A. No, sir; that is all.
Q. When were you first connected with the Grand Haven water works?
A. September, 1885.
Q. When did you become superintendent of the works here?
A. Well, about the first of October, 1885.
Q. You have been superintendent here ever since on the works?
A. Yes, sir.
Q. From where does the Grand Haven water works get its water supply?
A. From drive-wells and a dug well.
Q. How many drive-wells has it in connection with the water works?
294 A. 92.
Q. Were they all in operation when you came here?
A. No, sir.
Q. How many have been put in since you came?
A. 18.
Q. About what amount of water do those drive-wells furnish—the average amount through a year per day?
A. Well, they furnished 400,000 gallons when we tested them.
Q. What was the quality of the water from them?
A. A good quality—pure water.
Q. State what you have to say as to whether there is anything about that water deleterious to health.
A. Not as I know of.
Q. For what purposes has the company been furnishing water since you were connected and have been the superintendent?
A. For domestic and fire purposes, school purposes, sprinkling purposes, and all other purposes.
Q. Here in this city?
A. Yes, sir.
Q. What number of private consumers have you among the inhabitants that are supplied with water?
A. I think nearly 200.
Q. What has been the average number since you commenced?
A. From 123 to 200.
Q. You say the water works supplied water for school purposes. You may state for what schools.
A. The central schools.
Q. Of the city of Grand Haven?
A. Yes, sir.

Mr. NORRIS: I will interpose an objection to any evidence as to the use of water by schools. The schools of the city are not under the charge of the city of Grand Haven, and do not belong to the city. The common council have no jurisdiction over them.

295 Q. How many of the schools have been supplied with water from your water works?

A. Two of them.

Mr. NORRIS: Note an objection to all of that evidence.

Q. How came they to be supplied?

A. The school board asked for the water.

Q. Any charge been made to the board for the water? Have they paid for it, or anything of that kind?

A. No, sir.

Q. You spoke of water being furnished for fire purposes. You may state as to what amount and under what circumstances water has been supplied for those purposes since your superintendency.

A. Well, I could not state the amount unless you take the record for it.

Q. Have you kept a record of the number of fires at which your company has supplied water?

A. Yes, sir.

Q. State the dates and the particulars of each occurrence.

A. I kept a record as near as I could to my knowledge and under the circumstances.

Q. When was the record made; at the time of the fires?

A. Sometimes and sometimes afterwards. It is sometimes ten or twelve hours afterwards, and sometimes as soon as the fire was over.

Q. As to times that the record was made, state whether you knew at that time that it was correct—that the record was correct that you did make.

A. Yes, sir; I think that it was.

Q. You may state now, commencing with the first fire after your superintendency commenced.

A. October 8, 1885, 2.30 p. m., Herman Ott's saloon. Do you want me to give the location of those fires?

A. Yes, sir. Give the location, how long water was supplied,

296 and the *and the* number of streams supplied.

A. Two streams, one hour and 30 minutes; location, Washington and First streets, corner of Washington and First streets. December 5th, 1885, 11.15 a. m., Jonathan Vos' barn, two streams, 55 minutes; location, on Washington street, between Eighth and Ferry. December 21st, 1885, 7.20 p. m., Mr. Beams' dwelling, 2 streams, 45 minutes; location, on Madison street, between Third and Fourth. January 16, 1886, 2.10 a. m., Grand Haven match factory, one stream, 55 minutes. February 1, 1886, 10.10 p. m, Detroit, Grand Haven and Milwaukee freight-house, first six hours, four and five streams were used; the next 11 hours, 2 and 3 streams; location, foot of Washington street, on the river bank; also the grain elevator; I don't know who owned that.

Q. Was that at the same time?

A. Yes, sir. February 7, 1886, 7.10 a. m., Metz Leather Company tannery building, 2 streams, 6 hours. February 28th—I haven't got the hour of the day marked—Mrs. Fordham's dwelling, two streams, 45 minutes. March 25th, 11 a. m., Tony Bootz'- dwelling; location, on the end of Fifth street; two streams, 45 minutes. April 23rd, 9.15 p. m., Burk's dwelling, on Fulton avenue, between Ferry and Seventh street-, two streams, 2 hours and 15 minutes. July 21st—I have not the hour of the day marked—Kilbourn's kit and pail factory, located near the river, on Fifth street, two streams, 30 minutes. August 7th, 6.30 p. m., Kilbourn's kit and pail factory, same location, two streams, five hours. August 8th, Kilbourn kit and pail factory, 1 stream, 3 hours. September 12th, four p. m., the old Clark mill, located on the bank of the river at the foot of Clinton street, used as a dwelling-house, one stream, 45 minutes. Sep-
297 tember 12th, 10 p. m., M. Dykhuis' barn and store and also the First True Christian Reform church, four streams, 2 hours. September 15th, 2.30 p. m., Grand Haven Lumber Company saw-mill, known as the Emlaw mill, located across the river channel, two streams, 9 hours. 1 fire—I didn't get the date of it—a small barn, on Pennoyer avenue, 1 stream, 40 minutes.

Q. Are those all in 1885?

A. In 1886. October 29th, at 2 a. m., C. Donker's saloon, 2 streams, 3 hours. November 14, 2 a. m., W. W. Smart's house, a house that he occupied at that time, corner of Columbus and First street-, two streams, one hour and 15 minutes. December 19th, 12.30 p. m., Huber building, corner of Third and Elliott streets, three streams, 3 hours and 10 minutes. December 28th, 8.30 a. m.—I should have said 12.30 p. m.—Joseph Kooimin, corner of Third and Fulton street-, two streams, 20 minutes. March 8th, 1887, 8.30 a. m., William Verburgmous, on Madison street, dwelling-house, one stream, 40 minutes. March 9th—I haven't the hour of the day—F. F. Summer's dry kiln at the match factory, one stream, 40 minutes. March 13th, 7.45 a. m., W. F. Kriger's old building, corner of Madison and Third streets, also the Madison boarding-house, same location, three streams, 2 hours. April 7th, 1 p. m., David Brown's blacksmith shop and dwelling-house, located on Elliott street, near the D. & M. railroad, 3 streams, 2 hours and 5 minutes. April 21st, 4.40 a. m., Gerrit Pellygrom and Teitz dwellings, two streams, 1 hour and 20 minutes. June 24th, 5 p. m., Baker's saw-mill, located near the West Michigan railroad on the river, 1 stream, 20 minutes. June 30th, 1.40 p. m., Summer's match factory, 1 stream, 30 minutes. August 6th, 4.50 p. m., Summer's match factory, 1 stream, 45 minutes. August 12th, 1887, 1.30 p. m. Summer's match factory, 1 stream, 30 minutes. September 17th, 7.30 a. m., Robinson's
298 ship yard boiler-room, 1 stream, 15 minutes. October 28th, 5.30 p. m., Grand Haven broom works, located on Washington street, corner of Washington and Griffen, 1 stream, 45 minutes. November 5th, 9.30 a. m., A. S. Kedzie's building, located on Columbus street, between Fourth and Fifth, 1 stream, 35 minutes. January 19th, 1888, 8.50 a. m., Beach Tree school-house, 2 streams,

1 hour and 40 minutes. April 12th, at 11.30 a. m., Pete Danhoff's dwelling, located on Fulton avenue, between Seventh and Ferry street-, 2 streams, 1 hour. That is all.

Q. Were these fires all within the city of Grand Haven?

A. Yes, sir.

Q. Who used to manage the water that was used for these fires?

A. Well, the fire department—the chief of the fire department—had charge most of the time; the chief or assistant chief.

Q. Of the city?

A. Yes, sir; the city of Grand Haven.

Q. When these fires occurred how were you notified, or how did you come to furnish water? Were fire alarms given you?

A. Fire alarms given to us by telephone, excepting two or three times.

Q. Then what did you do when you received the fire alarm?

A. We generally put on a little extra pressure; fire pressure on.

Q. Well, as to what extent of pressure?

A. Well, we generally pumped a pressure of 70 to 80 pounds to the square inch.

Q. Well, as to the amount of pressure you immediately furnished, state whether it was sufficient or otherwise for the occasion.

A. It seemed to be sufficient for the occasion.

Q. Whether any complaint of a want of fire pressure from your engines was made at any time.

A. One time, I believe, there was.

299 Q. What occasion was that?

A. That was the time the tannery burned. It was some 12 or 13 hundred feet of hose laid to reach the fire from our hydrant and there were a number of leaks on the hose.

Q. Who laid the hose?

A. The fire department. We pumped our usual prsssure that we generally pump for fires, and I went to the fire and saw the streams were not carrying up as they usually did, and the chief asked why we didn't have more pressure. I asked him how much pressure he wanted and he said he wanted 120 pounds. I told him he had a number of leaks on his hose, and I thought we had plenty of pressure, so I telephoned to the engineer and gave him the pressure that he called for, which he did.

Q. What is the usual pressure that has been found sufficient for fires?

A. About 80 pounds to the square inch.

Q. On this occasion that you telephoned to the engineer was the pressure that he asked for immediately given?

A. Yes, sir.

Q. How soon after receiving an alarm of fire are you able to give fire pressure at the pump-house?

A. Well, two or three minutes.

Q. State whether you have done so or not.

A. Yes, sir; we have done so as soon as we got the notice.

Q. State whether you had any complaints made from the fire department or otherwise as to a want of pressure any time.

A. Yes, sir; we had some complaints to that effect.

Q. Well, what were they?

A. They were times that we hadn't the alarm before they had hitched on. There was no alarm turned in until they opened the hydrant.

Q. So that you were not aware that fire pressure was wanted?

A. Yes, sir; until they had opened the hydrant and had
300 commenced to use the water.

Q. Well, those were the occasions, then, when complaints were made?

A. Yes, sir.

Q. Who furnished the hose used for the extinguishment of fires with your water?

A. The city fire department.

Q. The fire at the Grand Haven depot you spoke of. Where is the depot located?

A. It is located at the foot of Washington street, on the river bank, extending north.

Q. How far from your pump-house?

A. Well, I never measured the ground. I should think it was about a mile and a quarter.

Q. About the furtherest point of any from your pump-house?

A. Yes, sir; about the furtherest point.

Q. How many hours were you furnishing water there, four or five or six streams—five streams, I think, you said?

A. Yes, sir. We were furnishing water 17 or 18 hours.

Q. What have you to say about the water pressure you furnished there at that time?

A. Well, we pumped. It was a very windy night, and I telephoned the engineer to hold one hundred pounds pressure on the pipes when I saw what start the fire had had, and we had run along, I should think, about two hours, and I met the chief, and I asked him——

Q. (Interrupting.) The chief who?

A. The chief engineer of the fire department. I asked him if he had pressure enough. He wanted to know how much pressure we were carrying, and I told him one hundred pounds. He said he had too much pressure. He said, "We cannot handle the hose so well; it is cold." The hose was bursting in different places. He said, "You better let the pressure down to about 70 pounds; have it let down to 70 pounds."

301 Q. Did you obey his directions in that regard?

A. Yes, sir.

Q. Did you notice yourself anything about the bursting of the hose at that time?

A. Yes, sir.

Q. Was it true that the hose were being bursted?

A. Yes, sir.

Q. From the amount of pressure you were carrying?

A. Yes, sir.

Q. Any complaints at any other time that you have spoken of for want of pressure for fires?

A. I think not.

Q. You spoke of furnishing water for sprinkling. What is there about that—for sprinkling what?

A. Well, sprinkling lawns and streets.

Q. What have you to say about the sufficiency of water supply for fires, sprinkling, and domestic and all the purposes that you have been called on to supply water for during your superintendency, as to whether it has been sufficient or not?

A. It has been sufficient; plenty of water at all times.

Q. Any complaints of a want of sufficiency of water for any of these pipes?

A. No, sir; not to my knowledge.

Q. What kind of a pump-house have you?

A. We have a brick and stone building.

Q. Fire-proof?

A. Yes, sir.

Q. How is it as to being commodious and sufficient for the purpose for which it is designed?

A. There is sufficient room for all purposes that is required.

Q. What is the capacity of your pumping engine per day in gallons?

A. Well, we never have tested. I never tested their capacity. They have always pumped all we wanted at all times with perfect ease. I should judge her capacity to be in the neighborhood
302 of two million gallons in 24 hours.

Q. Are the pumps double or single?

A. We are running them double; they can run single.

Q. You can run them either way?

A. Yes, sir.

Q. One independent of the other?

A. Yes, sir.

Q. What fire pressure can you use—how high a fire pressure can you obtain from your pumps?

A. We can obtain 150 pounds if necessary.

Q. Have you found it necessary to go as high as that?

A. It has not been yet.

Q. What is the capacity of your boilers for furnishing steam for power?

A. Well, they seen to have ample capacity.

Q. For what horse-power engines are they sufficient?

A. Well, I should think about eighty horse power each.

Q. How many boilers?

A. Two.

Q. And each boiler that capacity?

A. Yes, sir.

Q. State whether the boilers can be used singly or in connection with each other.

A. They can be used both ways.

Q. Either one would give eighty horse power, you say?

A. Yes, sir.

Q. What amount of water mains and pipes has your company laid down in the streets of the city?

A. Well, I couldn't give you the exact number of the extensions and surfaces, but I think there is about six miles and two-thirds of main pipe.

Q. Were you here when the pipes were laid down?

A. No, sir; not when the main pipes were laid.

Q. State whether you are acquainted with and know the location of all the hydrants upon the mains laid in the streets.

A. Yes, sir; I am.

303 Q. And, judging from the location of these hydrants and pipes and mains in the streets, are you able to judge in that way what amount or length of pipe there is laid in the street?

A. Well, I think I am; yes, sir.

Q. Well, from that means how much pipe—that is, of mains—would you judge were laid in the streets then?

A. Well, I should judge it was in the neighborhood of six or seven miles.

Q. Fully six miles?

A. Yes, sir.

Q. What can you say as to the capacity and ability of your engines and pumps and mains to supply all the water that is needed and required in the city for fire, domestic, and other purposes for which water is required or needed from the water works?

A. Well, it seems to be ample capacity.

Q. For all of these purposes?

A. Yes, sir.

Q. Do you know about what has been the average daily consumption of water since you have been superintendent of the works for fire, domestic, and other purposes?

A. Well, the average daily consumption has increased considerable for the last year and a half. I should think the average daily capacity to be about 250,000 gallons.

Q. The capacity or consumption?

A. The consumption, I should say.

Q. Is that the highest point it has reached, do you think; the highest average?

A. Well, I don't think it is.

Q. I mean the highest average for the year—not the highest which you have run in one day, but the highest average for a year.

A. Well, I think that is about what it would average for
304 the last year, ending last April.

Q. Have you any other source of water supply aside from the drive-wells?

A. We have a dug well.

Q. Any besides that?

A. Yes, sir; we have a river pipe.

Q. A pipe connected with the river?

A. Connected with the river, or well, rather.

Q. What do you mean by the river well?

A. I mean that the pipe doesn't run direct from the pump-house into the river. There is an arrangement fixed to conduct the water one hundred feet from the river to this well, you might call it.

Q. And then from the well to the pumps?

A. Yes, sir.

Q. So that that source of supply is from the river, is it?

A. Yes, sir.

Q. Have you ever had occasion to use water from that source during your superintendency?

A. We have during fires.

Q. And how often?

A. Well, as often as we had our largest fires—the heaviest fires.

Q. Well, about how many times, if you can tell?

A. Well, I should think probably a half a dozen times.

Q. How did you use it?

A. We used it when our wells won't hold out, in time of fire, and we want to supply enough water; we make up with the river water.

Q. And use from both?

A. Yes, sir.

Q. When the wells are not sufficient for the supply you use from both at the same time?

A. Yes, sir.

305 Q. On any other occasion when you have had to use water from the river or have used it?

A. I think that there is two. One was we had a break in our drive-well line, the main pipe or line to the drive-wells, which took us some six or seven hours to find and repair.

Q. How long did you use the river water at that time?

A. I should think about six hours.

Q. Well, the other occasion you spoke of, when was that?

A. That was when we were connecting a new line with the drive-wells or with the old line of drive-wells.

Q. How long a time was that?

A. That was two years ago this month, the first sime.

Q. How long did you draw from the river then?

A. Probably three-quarters of an hour or an hour.

Q. Was there any occasion last summer a year ago in which you used water from the river?

A. No; not only in time of fires.

Q. Last season was there any occasion on account of the dry weather to resort to the river for any supply?

A. No, sir; only in time of fire.

Q. Was there any time that the dry weather caused you to do it?

A. Not to my knowledge.

Q. Have you found any obstructions to your drive-wells that have diminished your water supply any?

A. Well, at times we found that some of the filters were cor-oded, which we had to replace with new ones.

Q. Those you have found in that condition, what have you done about it—replace them?

306 A. We have replaced them with new ones as fast as we found them.

Q. You may describe the manner of connecting this river water or river well, as you call it, with the pump-house.

A. Do you want to know in which way the river up there is connected with this river well?

Q. Yes, sir.

A. It is connected into a well that is made out of pine plank, which is located one hundred feet this side of the river.

Q. How does the water get from the river to the well, by suction or syphoned?

A. It runs in this and runs through a conducting spout three by three and a half feet square.

Q. Then from this river well, as you call it, to the pump-house it is taken how—by suction from the pumps?

A. Yes, sir.

Q. And at the time when you have used river water in connection with the well water what effect has that had about the making of the water deletarious to public health or not?

A. I don't think it had any effect.

Q. On the occasion that you have used river water at fires have you done anything about flushing out afterwards?

A. Yes, sir.

Q. State what.

A. Well, we have flushed out the line—the water out of the line that was nearest to the fire; generally the evening or the preceding evening or right away after the fire.

Q. Why did you flush it out?

A. Well, this water was considerably warmer than the water we had been pumping, and it is especially so in the -mer time and we wanted to get rid of that warm water.

Q. Did you get rid of it effectually in that way by flushing it out?

A. Well, we got rid of the most of it.

307 Q. When you came here had the city any water works of its own?

A. They had a small plant; yes, sir.

Q. Do you know what amount of pipes they had laid in the streets?

A. They had about a half a mile of pipe.

Q. What was the character of them?

A. Wood and iron.

Q. Where did they get the water supply?

A. They got it from drive-wells in the river.

Q. From the river adjacent to what part of the city?

A. At the lower part of the city.

Q. Your pump-house is connected with the river at what part of the city?

A. At the upper part.

Q. Above or below where any sewerage from the city would enter the river?

A. Above.

Q. The water supply from the river for the city pump-house—is that above or below the part of the river that would receive the city sewerage?

A. That is a little below.

Q. Do you know whether the city had made any extension of its mains?

A. Yes, sir.

Q. When did it commence to do so?

A. Well, since I have been here; it commenced last September.

Q. From the time your superintendency commenced last September was there any extension of their mains that you know of?

A. No, sir.

Q. How much did they extend their pipes and mains since last September?

A. I should think in the neighborhood of two miles; a mile and a half or two miles.

Q. Upon what streets—that is, with reference to streets occupied by your water works?

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A. Washington.

Q. In other words, whether they have extended their pipes in the same streets that the Grand Haven works were or in other streets.

A. Principally on the streets where the Grand Haven water works pipes were.

Q. And in what part of the city with reference to the density of population?

A. Well, in the most business part of the city.

Q. Have they laid any pipes since last fall in streets not occupied by your pipes?

A. They have laid some; yes, sir.

Q. How much?

A. Well, I couldn't say just the number of feet, but I should think a quarter of a mile, more or less; a quarter of a mile, I should guess.

Q. More than one street, or simply connecting their pipe across a square?

A. It is connecting across from one street to the other.

Q. And only in one street?

A. No; in two or three.

Q. All connections—merely connections of the pipes from one street to another?

A. They are laid back on the sawdust—what they call back of the sawdust—to the Kilbourn kit factory and match factory, on Fifth and Sixth streets, I think; I think at the end of Fifth and Sixth streets.

Q. What effect has it had upon the water consumption of your company in those streets where they have extended their pipes in the same streets that your pipes were laid?

Mr. NORRIS: That is objected to as irrelevant and immaterial.

A. Well, it has affected us about $450 worth.

309 Q. Well, in what way?

A. By taking our consumers.

Q. How many of your consumers have they taken—private consumers?

A. Well, in the neighborhood of 30 or 33.

Q. You say it effects you about 450. What do you mean by that?

A. Well, it reduces our tariff.

Q. Reduces your income?

A. Our income from water consumers.

Q. $450 for what length of time?

A. For a year.

Q. Have you any means by which you can tell exactly the amount?

A. I can tell by the application book, sir.

Mr. NORRIS: I want all of this testimony taken under the same objection.

Q. Since the city has made its extensions of its pipes and mains last fall how many consumers do you find from your application book have taken water from the city?

A. I find 25 have changed over instead of 33.

Q. What is the yearly amount of the water tax you lose by that?

A. The total amount is $488.

Q. When did the city commence supplying its water to private consumers from the extended mains and pipes?

A. It commenced the latter part of September.

Q. Last year?

A. Yes, sir.

Q. Now, about the water which you have been furnishing to the citizens here—to private consumers—what complaints, if any, are made to you as to the quality of water you are furnishing?

A. Well, there have been some complaints made.

Q. When and on what occasions?

310 A. Some complaint being too warm; at other times some claim that the water gave a reddish color.

Q. Well, what was the fact about the quality of the water at those times that they spoke of?

A. Well, the fact is that it was warm weather and possibly had been drawing off at some hydrant to move some water that had been standing in some corner long, so that they caught a portion of it.

Q. Then at these times, in regard to the healthfulness of that water, was there anything deletarious to health in the water—at these times complaints were made that you speak of?

A. No, sir; not as I know of.

Q. Do you know what there was about the reddishness of the water—what caused it or whether there was any such thing?

A. I think it was caused by standing in some corner for a time and discoloring from the pipe, and the extra drawing off at the hydrant had moved it along.

Q. Standing in some corner? What do you mean by that—some part of the pipes that the water wasn't moving?

A. Where it could not get out unless there was a hydrant opened.

Q. State whether or not there was a portion of the city where your pipes extended that there are not among consumers.

A. Yes, sir; we have some pipes that we have no consumers on, on streets.

Q. Some that have but few consumers on also?

A. Yes, sir.

Q. In the pipes and mains in those streets where there are none or only a very few consumers, what was the effect of the water standing in the pipes?

A. Well, the effect of the water would be—in time it wo-ld taste of the pipes, if it was not drawn off at the hydrant, and would turn red and dark color.

311 Q. When you came to open the hydrant upon any of these pipes or mains last spoken of, state whether that would cause a movement of the water as might reach some private consumers of this reddish color.

A. Yes, sir; it would.

Q. Is that the way you account for the reddish water they complain of?

A. Yes, sir; the principal part of it.

Q. Did they show you any of the water? Have these parties who complained of this reddish water shown you any of that?

A. No, sir; not to my recollection.

Q. What other complaint was there besides warm water and the reddish water, if any, as to quality?

A. I don't recollect that there was any other complaint.

Q. At these times when you have been furnishing water for extinguishment of fires and the fire department has used the water, state whether you have seen the aldermen or any of them present at the fires.

Mr. NORRIS: I object to it as immaterial and incompetent. The presence of aldermen has no tendency to bind the city in any way, shape, or manner.

A. I have, sir.

Q. State whether the use of the water by the fire department has been going on when they were present.

A. Yes, sir.

Mr. NORRIS: The same objection.

Q. How often and how frequently have you seen them present at the use of water at fires?

Mr. NORRIS: The same objection.

A. Well, three or four different times that I can bring to recollection.

312 Q. Well, how many of the aldermen of the city?

Mr. NORRIS: The same objection.

A. Three that I can remember.

Q. Have you seen the mayor present when the water was being used in that way?

A. Yes, sir.

Mr. NORRIS: The same objection.

Q. What have you to say as to whether the Grand Haven water works have been or have not been ready at all times to furnish whatever water was needed during your superintendency?

A. They have been ready, sir, at all times.

Q. What have you to say as to whether the population of the city is sufficient to support two systems of water works?

Mr. NORRIS: I object to that as immaterial and irrelevant and it don't appear that the witness knows.

A. I don't think it would support two systems.

Q. In supplying the private consumers with water what do you do in connecting their premises with your mains?

A. They make application first for water.

Q. No; I mean what does the company do in supplying them. In connecting their premises how much connection does you company have to make?

A. We make the connection from the main pipe to the curb, to the edge of the sidewalk.

Q. To the curb of the private premises?

A. Yes, sir.

Q. What is the cost of connecting the mains in the streets to the private premises or carrying connections to the curb?

Mr. NORRIS: That is objected to as immaterial.

313 A. Well, the average cost would be about $10—$10.50.

Q. To each of the premises?

A. Yes, sir.

Q. How many employees does your company keep in the service?

Mr. NORRIS: The same objection.

A. We keep three steady and at times six or seven.

Q. Those that you keep steadily employed, how many are there?

A. Three.

Q. What are their duties?

Mr. NORRIS: The same objection to all of this.

A. Engineer, superintendent, and night engineer.

Q. The others that you speak of, for what purpose are they?

A. For excavating and repairing.

Q. What wages does your company pay the superintendent?

Mr. NORRIS: The same objection.

A. It pays him $600 a year.

Q. And the engineers?

A. About the same, $600 a year.

Q. Apiece?

A. No, sir; the head engineer, $600 a year, and the night man, $35 a month.

Q. And the other employees how much?

A. Well, we have been paying them a dollar and a half a day.

Q. The expenses of connecting the mains to the curb, who bears that, in furnishing water to consumers?

Mr. NORRIS: That is objected to as immaterial.

A. The water works.

Q. Your water works?

A. Our water works.

314 Mr. UNDERWOOD: Judge Howell asked you in regard to any complaint of want of pressure at any fire. I want to call your attention to a specific instance, if you remember it: Do you remember at some fire when an alarm was given of your having a pump disconnected and one of them under repair?

A. Yes, sir.

Q. What fire was that?

A. That was the Dykhuis barn and the dwelling and the church on Fulton and Fourth streets.

Q. When was it?

A. Well, I can't bring it to memory.

Q. Well, about when? I don't care about the exact date.

A. I think it was a year ago last October.

Q. What was the fact at that time about the pump being disconnected? What were you doing? Go on and tell us.

A. Well, we were getting the keys. They were disconnecting pumps. One of the keys got loose that held the balance wheel to the shaft, and when we come to examine the key we found that it had been working loose there and was rather too small to tighten up as it should be, and so I sent the key down in the evening to have a new one made, and the blacksmith said he could not——

Q. Never mind what the blacksmith said.

A. We couldn't get a new one made that evening, and he brought that back and put it in again and didn't connect the pump to the other one. Well, when the fire alarm was turned in they ran the one pump for awhile and found that the one pump could not keep the pressure easily, so we shut the one pump down and connected the other one on.

Q. How long did it take you?

A. About four minutes.

Q. And then what did you do?

A. Then we put the pressure up to fire pressure.

315 Q. And run both pumps?

A. Yes, sir.

Q. Will you state whether there was any other occasion of any delay—not having fire pressure when you had an alarm—any other occasion than this?

A. I think not.

Q. Will you tell us what kind of a season it was last summer in regard to being wet or dry?

Mr. NORRIS: I object to that as immaterial.

A. Very dry.

Q. Can you tell us what time of day in the summer time you have the largest consumption of water—I mean independent of fire—for domestic consumers and others of any time you have there?

A. Yes, sir. The time of day is generally from six in the morning until nine at night.

Q. Can you give us any idea what portion of the water used in the summer time is used for sprinkling lawns and streets?

A. Well, I think more than one-half during the dryest season.

Q. What was the effect last season of the drouth in increasing the demand for water for lawns and streets?

A. The effect on our supply do you mean?

Q. Will you tell us what the effect of the drouth last summer was in the increase, if any, of water for use in sprinkling lawns and streets?

A. Do you mean the effect upon the water?

Q. No; the effect upon the demand for water—the use of water.

A. Well, it increased the demand, of course—the use of it.

Q. During that dry season last summer do you know whether or not, for domestic supply, your engineer on some occasions opened to some extent the pipe in the river well, so as to mix, more
316 or less, the river water with the water from the other sources?

A. No; I don't know it to my own knowledge.

Q. You mean to say you don't know whether he did or not?

A. No, sir; I don't know as he did.

Q. You know the reservoir up there?

A. Yes, sir.

Q. Did you use that any last summer?

A. We possibly might have used it some towards evenings; we possibly might; I wouldn't say how often or I don't know just how often.

Q. What was the name of your engineer, the day engineer, there?

A. C. E. Wheeler.

Q. He is still there, is he?

A. Yes, sir.

Q. When you first came here what means did you have of putting water into the boilers?

A. We had an injector.

Q. The Jenks injector?

A. Yes, sir.

Q. How did it work; by water pressure?

A. By steam pressure.

Q. In case you would use a good deal of steam you may tell us whether it was defective or not when you were using a good deal of steam and running your pumps at a pretty high speed.

A. Well, no; nothing defective to the injector.
Q. What have you since put in?
A. We have put in a plunger pump.
Q. A Gaskill pump?
A. Yes, sir.
Q. That pumps cold water or warm water into the boiler?
A. That pumps cold water through the heater, which is warm when it gets through the heater.
Q. It is warm in its passage through?
A. Yes, sir.
Q. And cold water when it leaves the pumps?
A. Yes, sir.

317 Q. State whether it is capable of supplying the boiler with water.

A. Yes; sir; capable of supplying it to its fullest capacity.

(Signed) A. M. COSGROVE.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

——— ———.

318 Cross-examination by Mr. NORRIS:

Q. I think you said you had been employed in Adrian and Niles at the water works.
A. Yes, sir; and also Richmond, Indiana.
Q. Those were all works built by the Wiley Construction Company?
A. Well, I couldn't say as to the Niles works whether he built them; I think he rebuilt a portion of them.
Q. The others were built by him?
A. Yes, sir.
Q. You say you came to Grand Haven in September, 1885?
A. Yes, sir.
Q. When did you make this test which you say you made; and these wells produced 400,000 gallons of water per day?
A. In October, 1885, I think; either the first of October or latter part of September, 1885.
Q. Has the supply from these wells diminished any since?
A. Well, I couldn't just say as to that; we have not tested them since to know; to give them a real correct test.
Q. What was the nature of the test you made in October, 1885?
A. Well, we opened a fire-hydrant and ran the pumps to hold the water down to a certain point in the wells for two hours, and we pumped it down to a certain point first and held it there for two hours and we figured from that.
Q. Did you measure the water that was drawn or pumped during the two hours?
A. We measured it—the pumps measured it; we knew the capacity of the pumps and we kept the engine register at the time we started and also at the time we got through.

Q. What do you call the engine register?

A. That registers the revolutions that the pumps make—that the engine makes.

319 Q. Can't you run that pump say at 100 revolutions per minute and not throw any water at all?

A. Well, no, we could not unless we shut our water supply off.

Q. Well, are you always certain that the pumps are doing a certain number of revolutions; that you are throwing the entire capacity of the pumps in water?

A. Yes, sir; we are.

Q. Suppose the water isn't there to throw?

A. Well, if it is not there to throw we are not throwing any water, but the water was there at that time.

Q. You never tested the works since?

A. No.

Q. That, as I understand you, was the entire supply from all sources except the river?

A. Well, we possibly might have got more water——

Q. (Interrupting.) I don't ask you if you possibly might have got more water. I asked you if that is all you got from all your sources of supply except the river.

A. No; I don't think it was.

Q. Where else did you get it?

A. If we had pumped direct on the drive-wells we would have got more. We pumped from the dug well and let it syphon in from the drive-well to the dug well.

Q. At the time of this test when you got 400,000 gallons you were pumping on all the wells except the river well?

A. No; we were pumping——

Q. (Interrupting.) You were getting water from all the wells except the river well?

A. I think we were getting some water from all the drive-wells.

Q. Those drive-wells you speak of all produce about the same amount of water; they are nearly the same size?

320 A. Well, probably there might be a half an inch difference in size.

Q. Well, wells of the same size produce substantially the same amount of water each, so fas as you know?

A. Yes, sir; I should think so as long as they are in working order.

Q. Now, when was it you put down those eighteen wells that you said you put down?

A. I put down those eighteen wells a year ago last—two years ago this month—a year ago last June.

Q. That would be in June, 1886?

A. Yes, sir.

Q. Is that all that you have put down yourself?

A. No; I have replaced some in the old line.

Q. Now, this line of drive-wells that you have got—they are all on the same pipe, are they not?

A. They are all connected.

Q. They are all connected in one pipe?

A. In one main suction.

Q. If you want to repair one of those pipes you have got to shut your pumps off of that entire line?

A. Well, yes, sir; if you were going to be at it any length of time.

Q. Now, suppose one of the pipes on one of those wells bursts or gets cracked so that air is admitted to the suction pipe, it stops your pumping on that entire line of drive-wells, don't it?

A. Yes, sir.

Q. You stated that the capacity of those pumps were two million gallons a day; how do you know that?

A. I said they were about that capacity. I took it from the——

Q. (Interrupting.) You take it from what somebody told you, don't you?

A. No, sir; from the speed they can run the pumps and the amount of water they pump to a revolution.

321 Q. That is your opinion. How do you know the amount of water they can pump to a revolution?

A. I know by the size of the plungers.

Q. Well, how do you find out? Tell us how you find out how much water they throw at a revolution?

A. Well, the man that built the pumps was there, and he claimed they would throw that.

Q. That is the way you found it out?

A. Not materially. I figured on it some.

Q. Well, how did you figure on it?

A. Well, I figured on the stroke and the size of the plunger.

Q. Well, how much is the stroke?

A. A 12-inch stroke.

Q. And the size of the plunger?

A. 8 inches and a quarter.

Q. How can you tell from that how much water it would throw at that stroke?

A. Well, there are several ways of telling.

Q. Tell me one of them?

A. One way is to fill a vessel or can the size of the plunger, and also the length of stroke.

Q. Did you ever do that?

A. Yes, sir; we have tried that.

Q. You have got a can the same size as the pump?

A. Yes, sir; the same size as the plunger.

Q. You had it made for that purpose, I suppose?

A. Yes, sir.

Q. Well, now, if you did that how much water does it throw in one stroke?

A. At one stroke it throws two and a half gallons; one stroke one way of the plunger.

Q. That is according to your measuring, is it?

A. Yes, sir; the stroke each way will throw five gallons, one pump.

Q. Did you ever measure up this pipe in the streets?

A. No, sir; I never measured it up.

322 Q. How do you know that there is six and two-thirds miles of it?

A. Well, I should take it from the number of squares and the blocks that it reaches through in the town.

Q. You just figured it up that way?

A. And the location of the hydrants would show that it would take that much pipe to reach them.

Q. Do you know whether there are any cities above this city on the Grand river that pump their sewerage into the river?

A. I couldn't say. I know there are cities above here, but as to pumping the sewerage into the river I couldn't say as to that.

Q. There are are a good many villages on the banks of the river above here too, aren't there?

A. I never saw them.

Q. Well, there are some very good sized marshes on the river up above here, aren't there?

A. There may be. I never was up the river, sir.

Q. Do you consider water taken from a marsh fit to drink?

A. I don't consider it is deletarious to health particularly.

Examination by Mr. SEELEY:

Q. At the point where your pipe connected with the river is a marsh, is there not?

A. Well, I don't know as you call it a marsh.

Q. What do you call it?

A. Well, we call it the channel of the river.

Q. Is it a main channel of the river?

A. Well, I think it is one of the main channels.

Q. How far is it from the main channel?

A. Oh, I should think it was not over 300 feet where it empties into the main channel.

Q. It is in a bend of the river where you connect?

323 A. Well, somewhat of a bend; not a very short bend. It is called the Beach Tree channel.

Q. A steamboat going to Grand Rapids don't take that channel where your pipe is?

A. No, sir.

Q. It goes to the left of that in going up or to the north?

A. A little to the northeast.

Q. You spoke about street-sprinkling, furnishing water for street-sprinkling. Do you mean to be understood that water is used from your works for the purpose of sprinkling the streets of this city?

A. Yes, sir; they were furnished some last summer.

Q. You furnished some last summer?

A. Yes, sir.

Q. To the wagons that sprinkled the streets?

A. Yes, sir.

Q. Whose wagons did you furnish it to?

A. Well, Mr. Sprick had charge of the wagons.

Q. He was running that on his own responsibility, wasn't he; private street-sprinklers of his own?

A. I suppose so.

Q. He made a bargain with you himself to pay you for what he had?

A. Yes, sir.

Q. The city has never used any of your water for street-sprinkling, has it?

A. Not to my knowledge.

Q. Now, in case of fires, where do you get your notice of the fire; from what source?

A. Telephone principally.

Q. The telephone exchange office in this city, isn't it?

A. I suppose it comes from there.

Q. Have you made any arrangement with the manager of the telephone exchange to give you notice when there is a fire?

324 A. No; I haven't made any particular arrangement with him.

Q. Have you made any arrangement with him?

A. Well, I don't know as I have.

Q. Do you know whether your predecessor did?

A. No; I do not.

Q. Have you ever had any conversation with him about giving you notice when there was a fire?

A. No; I don't know as I have.

Q. You don't know as you have, did you say?

A. Yes, sir; I said that.

Q. Do you say that you have not?

A. Yes, sir.

Q. You do say that you have not made any arrangement with him to give you notice, do you?

A. Yes, sir.

Q. Then you don't know how it is or how he comes to give you notice in case of fire?

A. No, sir.

Q. You spoke about a fire at the freight-house?

A. Yes, sir.

Q. You say the hose burst upon that occasion?

A. Yes, sir.

Q. At what stage of the fire did the hose burst; at the beginning or close or in the middle?

A. Some of them burst in the beginning and some in the middle.

Q. Do you know whether they were hose that were attached to your hydrants or hose that were attached to the steamer of this city or the old works?

A. They were hose that were attached to our works.

Q. How many hose burst that were attached to your works?

A. Well, four or five sections that I noticed.

Q. Four or five sections burst?

A. Yes, sir.

Q. You say that the chief told you to lower the pressure?
A. Yes, sir.
Q. At that fire.
A. Yes, sir; he did after we had run about two hours.
325 Q. Was that before the fire was practically extinguished or afterwards?
A. Well, it was about in the hardest of the fire.
Q. It was about in the hardest part of the fire?
A. Yes, sir.
Q. Now, do — swear that it was not after the fire was practically over that he told you to lower the pressure or you might lower the pressure?
A. No, it was not.
Q. Were you there at that fire yourself?
A. Yes, sir.
Q. How far were you able to throw the water from your hose upon that occasion?
A. Well, we didn't stop to measure the distance how far the water was thrown
Q. Don't you know that the department complained that you didn't throw water far enough with your ho-e to materially aid in putting out the fire on that occasion?
A. Well, they could not throw it against the wind that there was there.
Q. Don't you know that they complained that you could not and did not throw your water far enough to materially aid in putting out that fire?
A. No, sir; I don't know that they complained.
Q. You don't know that they complained?
A. No, sir.
Q. You say, as I understand you, that the water during the past season and during the time you have been here was not deletarious to health that came from your works. Do you wish to be so understood?
A. Yes, sir.
Q. What is your knowledge upon that question; are you a chemist?
A. No, sir.
Q. Are you a physician?
A. No, sir.
Q. Did you ever analyze this water?
326 A. I tasted the water to a certain extent.
Q. Did you ever analyze it?
A. No, sir.
Q. Do you know what ingredients it contains—the water generally during the last season?
A. Not in particular.
Q. Then how do you know that it is not delatarious to health?
A. Because we used it right along in our own house for all purposes.

Q. Did you hear any complaints during the last season about the water being pure and good?

A. We heard some complaints.

Q. How many times did you hear complaints?

A. Well, I couldn't state correctly how many times.

Q. A good many times, didn't you?

A. Well, no.

Q. You did not a good many times hear complaints?

A. No, sir.

Q. How many times do you say you connected with the river last season?

A. I am not just able to state the number of times; probably a half a dozen times, as near as I could remember.

Q. Are you sure you didn't connect more than that number of times?

A. I don't think we did.

Q. Now, then, state as -ear as you can the number of times that you heard complaints about the water not being good?

A. Well, probably a half a dozen times.

Q. Did you not hear -t more than that number of times?

A. No, sir; not to my knowledge.

Q. You speak about this water being reddish at times; when were these times that this water was reddish?

A. Principally when we drew off the dead ends or opened the hydrant at some point.

327 Q. Did you ever hear or know of its being red or of a reddish color after a fire?

A. Yes, sir.

Q. I understood you to say that you connected with the river last season at some of the larger fires. Is that correct?

A. Yes, sir.

Q. Do you remember the occasion of connecting with the river at the time Mr. Kedzie's house caught fire here?

A. Yes, sir.

Q. You know about that fire, don't you?

A. Yes, sir.

Q. Was that a large fire?

A. Well, it was not a terribly large fire; no.

Q. Did you have any hose connected and playing upon that fire?

A. A line of hose off Fulton street.

Q. Only one line?

A. That is all that I saw.

Q. Was it used?

A. Yes, sir.

Q. For how long a time?

A. It was used for at least a half an hour or longer.

Q. Would such use as you put your hose to upon that occasion be sufficient for you to connect with the river?

A. Well, it would not be sufficient; no, not if we knew how much of a fire it was going to be.

Q. Do you know whether you connected with the river at that time, upon the occasion of that fire?

A. No, sir; I do not.

Q. If water within one hour after that fire was reddish, dirty, foul, and full of sediment, as taken from your works, what would you say about your having connected with the river on the occasion of that fire?

A. Well, it could be of that state without connecting to the river.

Q. It could be?

A. Yes, sir.

Q. What would occasion it?

328 A. The extra amount of water drawn off would start water from some point where it had been laying.

Q. At what particular point on the line of pipe would you expect to find such kind of water?

A. On Fulton street.

Q. Would you expect to find it on Washington street?

A. Well, we might have a small——

Q. Do you know where Mayor Kirby lives?

A. Yes, sir.

Q. He was using your water works then, was he not, using water from your works?

A. I think so.

Q. What would you say if within an hour after the fire at Mr. Kedzie's the water that came from Mr. Kirby's water works—that is, yours, which came through your works—being foul, dirty, reddish, and full of sediment—what do you say about that?

A. It possibly might be.

Q. Now, don't you know that it was the universal complaint during the entire season of 1887 that your water, the water taken from your works, was impure, and that the people generally who used it complained about its being impure?

A. There may be some of them complained of its not being pure, but not a majority that were using it.

Q. I understood you to say that you usually flushed out your pipes after fires?

A. Yes, sir; we do.

Q. How long after a fire would it take to get rid of this river water that you used so that your water-takers would have pure water again?

A. Well, that would depend upon how long the fire lasted and how much river water we had pumped.

Q. Well, take any fire we had during the year 1887, how long would it take?

A. Well, if you went right to work as soon as the fire was over it would clear the pipes in a couple of hours.

329 Q. Did you as a rule go to work immediately after a fire or within two or three hours after a fire to flush out?

A. I did most of the time.

Q. There were many times you didn't; isn't that a fact?

A. Well, there were sometimes that I waited until evening.

Q. Do you mean to say that the city did not extend its own works until September last?

A. Well, since I have been here—all the extensions they have made since I have been in town—I think the first was last September.

Q. When did you come to town?

A. I came here in September, 1885.

Q. Do you know of the city extending its pipe from Franklin street to the Detroit, Grand Haven and Milwaukee railroad round-house?

A. That was done before I came here.

Q. Do you know where Charles E. Soule lives?

A. Yes, sir.

Q. Do you know of the city extending its pipe to his neighborhood since you came here and before last September?

A. That was done before I came.

Q. Now, to return a moment: If this water which you took from the river was not deleterious to health why did you always flush it out after you had used from the river?

A. Well, it was not quite as clear and it was warmer, as a general thing, in the summer time than the well water.

Q. That is the reason why you flushed it out, was it?

A. Principally—yes, sir.

Q. Was there any other reason?

A. No, sir.

Q. That was the only reason why you flushed it out, because it was warmer and not quite so clear?

A. Yes, sir.

330 Q. Then if it was warmer and not quite so clear what occasioned this sediment and reddish color to it; this sediment that was in it and the reddish color of the water; what caused it?

A. Well, principally from places where the water had stood in the pipes; point where it could not get out only in time when the hydrant was opened and an extra lot of water drawn off.

Q. If that was the case you did not properly flush your pipes as you ought to?

A. We supposed we did.

Q. No matter what you supposed; it is a fact you did not if this water accumulates like that; isn't that a fact?

A. Well, yes.

Q. Do you know what the inner coating of these pipes is?

A. It is a preperation of asphaltum that I believe it is dipped in while they are hot.

Q. The inner coating of the pipe?

A. Yes, sir.

Q. Does water have any effect upon that by standing in it?

A. I don't know as the water does.

Q. Does that have any effect upon the water?

A. Yes, sir; it changes the taste of the water and also the color.

Q. That is the condition of the pipes and the mains through the city belonging to your works, is it?

A. Of the cast-iron pipe.

Q. What portion of the pipe in this city belonging to your works is cast-iron pipe?

A. Well, the most of it is cast iron excepting a couple of short lines.

Q. Have you at any time received orders from Mr. Wiley to flush out your pipes after drawing from the river or after a fire?

A. I did not direct from him, but I did from Mr. Cook, his engineer.

(Signed) A. M. COSGROVE.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

——— ——.

331 Redirect examination by Mr. UNDERWOOD:

Q. The counsel asked you this forenoon something about the amount of water that the pumps discharged, and you said with the forward stroke and with the back stroke it discharged two and a half gallons each. Now, will you tell us what there is with each revolution of the pump; there is a forward and back stroke?

A. There is five gallons.

Q. With each revolution of the pump?

A. Of one pump?

Q. And the two pumps?

A. Ten gallons.

Q. Counsel on cross-examination asked you something about at the Kedzie fire, if you attached your hose to the water works. Did the company have any hose here to attached?

A. No, sir.

Q. What hose was it that was attached to the Grand Haven water works?

A. The city hose that the fire department attached.

(Signed) A. M. COSGROVE.

Read over to the said witness and by him subscribed in my presence on this 26th day of June, 1888.

——— ———.

332 Recross-examination by Mr. NORRIS:

Q. What is the average speed you run those pumps at?

A. The average speed, do you mean, through the day?

Q. Yes, sir.

A. Well, 28 to 35 revolutions.

Q. 28 to 35 revolutions per minute?

A. Yes, sir.

Q. How do you run them when you have got a fire pressure on?

A. Well, probably we run 40 without any hydrant open with the fire pressure on.

Q. Suppose there is a fire on, how do you run them?

A. Well, we speed them up according to the number of streams that is put on and hold that same pressure.

Q. What is your average fire pressure, take it at an ordinary fire?

A. 80 pounds.

Q. How many revolutions?

A. Now, we would have to run, probably, 40 revolutions to carry 80 pounds.

Q. So that about 40 revolutions would be your ordinary working fire pressure?

A. Yes, sir; without any fire-hydrants open.

By Mr. UNDERWOOD:

Q. As to the number of revolutions you run when you get above 40 depends on the number of streams?

A. Yes, sir.

Q. If there is one stream you don't get as many revolutions as if there are five?

A. Yes, sir.

Q. How rapidly have you run the pumps in case of a fire?

A. Well, I don't think we have run them anything over 100 a minute.

By Mr. NORRIS:

Q. (Resuming:) What is the most pressure you have had on the water mains since the work started?

A. I think we have had on 150 pounds.

333 Q. When?

A. I could not just state the date, but we have tested the pumps and pipes with pressure one time about a year and a half ago.

Q. Is that the only time?

A. That is the only time we had that amount of pressure on since I had charge.

Q. How many strokes of the pumps would it take to make that pressure?

A. I think at that time it took about twenty-five.

Q. About twenty-five strokes of a pump?

A. Yes, sir.

Q. Do you mean twenty-five a minute?

A. Yes, sir; it was not in sprinkling time; they were not using so much water at that time.

Q. Well, you have spoken about having 100 pounds pressure; that was at some fire; is that the most you ever put on at any time?

A. 120, I believe, was the most we put on at any fire.

Q. How many strokes of the pump did it take to get that pressure—that is, how many a minute?

A. Well, when that pressure was put on there were two fire streams being drawn off, and with the two fire streams and some leaks on the hose it turned about sixty turns.

Q. About sixty strokes?
A. Yes, sir.
(Signed) A. M. COSGROVE.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

——— ———.

334 WILLIAM N. ANGEL, being recalled for further examination on behalf of the complainant, testified as follows:

Direct examination by Mr. UNDERWOOD:

Q. What book is this that I show you?
A. That is the record of the common council proceedings of this city number 6.
Q. Covering what time?
A. This is from July 19th, 1883, to April 29th, 1886, inclusive.
Q. One of the record books of your office as recorder of the city?
A. Yes, sir.
Q. I read to you from the bottom of page 251, the last two lines on page 251 and the first six lines on page 252 in the proceedings of the meeting of November 6th, 1884: "The recorder presented a communication from the Grand Haven water works signed by T. A. Taylor, secretary, giving notice that the water works are completed and they will charge the city rent for the hydrants from date, and asking to have a day appointed for a test of same. On motion of Alderman Sanford the communication was referred to the order of motions and resolutions." This morning I called your attention to that entry and asked you to make a search for that communication; have you done so?
A. I have.
Q. Are you able to find it?
A. I could not find it.
Q. I read to you from page 274 of the record of the meeting of January 17th, 1885, as follows: "The water works presented a communication asking for a further test of the water works and suggested next Monday, January 19th, at 10 o'clock in the forenoon as the time for such test. On motion of Alderman Sanford the
335 communication was referred to the special committee, consisting of Aldermen Safford, Blocker, and the city attorney, to report to the president if they deem it necessary to have a call of the council." I called your attention to that paragraph this morning and asked you to make a search for that communication from the water works; have you made such search?
A. Yes, sir.
Q. Have you been able to find it?
A. I have not been.
Q. Will you state whether in regard to both of these documents you have searched in all places where they would be likely to be found?

A. I think I have; wherever I could think that they would be likely to be.

Q. How long did you say you had been recorder?

A. Since April, 1837.

Q. And have you any recollection of seeing those communications?

A. I never have seen them.

Q. Either one of them?

A. I never have.

Q. (Showing witness Exhibit 5.) That was made by you, a certified copy of the proceedings of the council adopting a schedule of charges?

A. Yes, sir.

Q. Do you know whether it was published in the official paper of the city or not?

Mr. NORRIS: There is better evidence than that. I object to it as incompetent.

A. I am quite sure it was.

Q. As city recorder did you keep the account of the receipts and disbursements at the present time on account of the system of water works now operated by the city?

A. Yes, sir.

336 Q. Have you got your accounts here with you?

A. I have got a statement.

Q. It is in your book?

A. Yes, sir.

Q. Will you turn to it, please?

A. This is a statement that was prepared from books kept in the recorder's office for publication, as required by the charter, running from the 17th of March, 1887, to and including the 13th of March, 1888.

Q. Can you tell us the amount which the city has received from water rates during the year ending the 13th of March, 1888?

Mr. NORRIS: I object to any testimony upon that subject as incompetent, immaterial, and irrelevant to any of the issues in this case.

The WITNESS: The amount received for one year lacking four days was $502 from water rates.

Q. Will you now state the disbursements made to the city on account of operating expenses? I do not mean new construction, but for the operating expenses.

Mr. NORRIS: He has not stated all the income yet. If you are going to have any you might have the whole.

A. There was a small income; cleaning and testing the boiler and washing the pipes, &c., which was $31.60, which went to the credit of the same account. On the debit side of the same account the first item is the salary of the two engineers, $1,003.75; for repairs,

material, and labor, $358.57; for fuel and oil, $857.30; for building mains to water-takers, $356.21.

Q. Is that all?

A. That is all.

337 Q. When you speak of building water mains to water-takers that is the connection from the main in the street to the curb, isn't it?

A. Yes, sir.

Q. Of that income that you mention here—the water rate from takers, $502—how much is from the railroad company?

A. $300.

Cross-examination by Mr. SEELEY:

Q. Do you know of your own knowledge that the works or system of this city which it is engaged in extending now is completed or not?

A. No, sir; I do not.

Q. Do you know whether the city are furnishing and have been furnishing from their extension to the public to any extent whatever?

A. Well, the best means I have of knowing is the bills that have been presented and the orders issued upon them building these mains to the curb for water-takers. I think I have heard two or three persons say that they were taking the city water.

Q. Do you know when the last bill was presented—how long ago it was?

A. Well, I could not be certain now without referring to the record, but I would say it was some time in March.

Q. Last March?

A. I should say so without examination.

Q. Do you know as a matter of fact that the city have been as a rule connecting private takers with their system of water works.

A. Well, the impression I have from seeing the bills, not from my own knowledge, but from what I have heard, that there

338 were a few persons connected with the city water works.

Q. At the present time?

A. Yes, sir.

Q. So that the receipts from the water works could not of necessity be any considerable amount under the circumstances?

A. No, sir.

Redirect examination by Mr. UNDERWOOD:

Q. To whom does the person wanting to take water from the city system make application to be connected with the main?

A. I don't know.

Q. Is there any license issued by you?

A. No, sir.

Q. Is there any officer of the city that you know of that has control of that?

A. I don't know that there is.

Q. Who orders these connections from the main to the curb made?

A. I could not say..

Q. Who sends the bill to you?

A. The party doing the work.

Q. Is that bill accompanied by any order from any officer of the city?

A. No, sir; it is not.

Q. Or any order from the common council?

A. No order from the common council when the bill is presented

Q. Is it certified by any member or anything of that kind?

A. Well, I think those bills have been, though I could not be certain about that without examining them, but they have been certified by some person.

Q. Do you know of anybody who has made any application for water from the city water works who has desired it who has not got it?

339 A. No. In fact, I could not say from my own knowledge that any person has made application.

Q. All you have to do is with the payments that are made here, the payments made on account of this matter, and the receipts that come into your hands, but as to the people taking water and their reasons for it, you don't know?

A. I know nothing about that.

Q. Have you any list of who the takers are?

A. Well, I think not. I think there has been no list made since I have been recorder.

Q. Who makes out the bills—the water-rate bills?

A. Well, that I could not say.

Q. Who do you get the money from?

A. All the money that I have received from water rates has come through the city marshal to me.

Q. Have you ever given him any warrant or any bills or anything of the kind to collect?

A. Never.

Q. Then you simply received the money from him?

A. From him; yes, sir.

Q. Did you keep any account with each taker?

A. No, sir.

Q. No book account kept?

A. No, sir.

Q. Can you turn to any place in your record of the common council of the last year where there any proceedings of the council in regard to furnishing people water?

A. Nothing, except that schedule of rates.

Q. That is all?

A. That is all.

Q. Any authority to the marshal to make bills?

A. No, sir.

Q. Or to any committee?

A. No, sir.

Q. Or any officer?

A. No, sir.

340 Q. There is nothing upon the record to determine?

A. No, sir; or no action of the council since I have been here.

Recross-examination by Mr. SEELEY:

Q. As yet, so far as you know, no ordinance has been adopted or resolution passed or anything done on the part of the common council towards providing for a system of disposing water and collecting for the same, has there?

A. There has been nothing of the kind since the latter part of April, 1887.

Q. The water-works extension as yet has not been accepted, as far as you know, by the city?

A. I know nothing about that.

Q. So far as you know it has not been accepted?

A. So far as I know it has not.

Q. If it had been you would know it, wouldn't you?

A. Well, if there was any official action taken by the council I should know it.

By Mr. UNDERWOOD:

Q. What do you refer to as having taken place the latter part of April, 1887?

A. Well, that was the time when I was first appointed recorder.

Q. You mean to say since your incumbency of the office there has been nothing of the kind?

A. No, sir.

Mr. UNDERWOOD: We offer a copy of the Grand Haven Courier Journal of Grand Haven, Michigan, issued on October 1st, 1887.

(Paper referred to marked Exhibit 8.)

It is admitted that it is the official paper, and that this is the official publication of the council proceedings.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

(Signed.) WILLIAM N. ANGEL.

341 Mr. NORRIS: I object to the paper just offered in evidence as immaterial, irrelevant, and nothing to do with the case.

S. L. WILEY being recalled as a witness on behalf of the complainant, testified as follows:

Direct examination by Mr. UNDERWOOD:

Q. Did you hear Mr. Van Patten's testimony that the nozzles that were used at the time of the test were sent here by you?

A. Yes, sir.

Q. Will you state whether you sent them or not?

A. I sent them.

Q. What sized nozzles were they?
A. Exactly one inch.
Q. The inside diameter?
A. Yes, sir.
Q. How many of them were there?
A. Six.
Q. You gave some testimony the other day, that in order to throw a fire stream 100 feet high above the hydrant, and at the hydrant, it would require at the hydrant a pressure of about 50 pounds?
A. 50 to 55 pounds.
Q. You have heard the testimony of Mr. Van Patten and Mr. Cosgrove, that at the time of fires a pressure of about 80 pounds was ordinarly carried and had been carried as high as 100 and 120. Will you tell us the reason, if there is any, why it is necessary to carry a pressure so much greater at the time of a fire from what you would use at a test?
A. Ordinarily at a test the lines are much shorter than they are at a fire.
Q. The lines of what?
342 A. The lines of hose, and they are laid with a great deal more care than they are at a fire; at a fire, as a rule, the firemen are in a hurry and they lay their lines in an irregular manner, not waiting to draw them exactly straight, and have many kinks in them; a hose, a two and a half inch hose, they lay with many kinks and curves in, and they will require from three to five pounds pressure to overcome the friction for every 50 foot length of hose; ordinarily if laid straight it would not run more than thee pounds, and perhaps under very favorable circumstances not more than two pounds, the ratio of friction being according to the smoothness of the internal diameter of the pipe.
Q. Suppose you had a pressure that you required a pressure of 50 pounds at the hydrant and you had 400 feet of hose added to it at the nozzle and laid in the very best and straightest manner, what does experience show would be the pressure required in order to overcome the friction of the hose and give the same pressure at the nozzle that you otherwise would have at the hydrant, 50 pounds? How much more pressure would you have to add, 400 feet?
A. About 75 pounds; 25 pounds of pressure added.
Q. And if the hose was laid with kinks and laid curving and crooked?
A. You can add from four to six pounds pressure to 100 feet of hose laid.
Q. You heard Mr. Cosgrove's testimony this morning and the questions that were asked him upon cross-examination in regard to the red color of the water here and the sediment in it. In the first place, I want to ask you if you have examined and are acquainted with the water in Grand river and know whether it has much of any sediment in it except in times of freshet.
343 A. No, sir; not excepting in times of freshet.
Q. The water is somewhat colored?

A. Yes, sir. That is attributable to some low lands that it runs through.

Q. With your experience in the management of water works what do you find commonly and frequently in regard to sediment in the pipes and the red color of the water?

A. I find without exception in a single work that I have ever built or seen or heard of that water where the flow is not strong enough to change it within a certain period of time——

Q. (Interrupting.) Well, how long?

A. Probably three or four days will begin to decompose, whether it is spring water or whatever it is, and particularly so when confined where air cannot have access to it. I mean in a sealed tube.

Q. What is the result of that?

A. I find that all fresh waters will throw down a sediment, and the undoubted cause of the red sediment is the contact with the iron pipes. The coating that is on iron pipes is not an absolute preventive from contact with the iron. It is the best coating that has ever been found, and whether it is perfect you can judge from the fact that no water works is free from it. All dead ends of pipe wherever water stands a period of time will begin to throw down this oxide of iron, which will appear as a red sediment, and undoubtedly it throws out a great deal of other impurities that are in the water—that is, all waters contain more or less of solids; some more than others; consequently there is no water to-day that is free from it. So the old city water works here is not free from it to-day. I took a glass of soda water on Saturday—no; it was this morn-
344 ing—I took a glass of soda water in a gentleman's drug store named Hutty and I noticed the same accumulation on his tumbler-drainer and I made an examination of it and I found it was the same oxide of iron that is in all water, and it is the same in every work that I have ever seen built. Wherever you find fresh water confined in an iron tube there you will find this same deposit that looks like red sediment, being oxide of iron.

Q. Does that depend somewhat on the number of takers and the amount of water that is used?

A. Yes, sir; it depends entirely on how free your pipes are from it on the number of takers, and, another thing, it depends altogether on how many fires you have—as to how roil*l*y you sometimes get your water.

Q. Supposing this sediment is in the pipe and the water has been standing for some time in a portion of the system of piping and then a fire comes upon that portion, so that the water is driven through that portion of the town, what is the result as to making the water muddy and carrying sediment with it?

A. Large draughts of water will always cause commotion in the general system, like a fire-hydrant being opened. In fact the pipes are covered with a coat of slime in the freshest of waters.

Q. After they have been used some time?

A. After they have been used a very short time.

Q. It protects them from rust?

A. Yes, sir; and at the same time it is the very thing that causes

the rust, for the reason that it lays next to the iron and affiliates with the iron, and when there comes a rush of water it scours
345 this pipe perfectly clean and carries away this accumulation of oxide of iron that is formed with this contact with the iron pipe.

Q. Have you any water works in mind where the water is exceptionally good spring water where you observed this thing?

A. Yes, sir; I have in mind where the water comes from granite rock at an elevation of 500 feet above the town—505 feet—and there is no outlying land, no land above this stream except something like three or four hundred acres from which the springs that feed the source or make this source from which they take the water comes; that is at Athol, Massachusetts, and the same thing occurs there that occurs everywhere else. I have another case in point in this State which probably will demonstrate this full as well as any one, as the water is almost as pure and free from any solids as rain water, and that is at Niles, Michigan, where the water is taken from Berrien lake and it is as limped as glass, and the same thing occurs there.

Q. I don't know whether I asked you before, and if I did not I will now: Are you able to calculate how much water these pumps discharge at every revolution?

A. I figured up the capacity of the pumps here as near as I could calculate; I calculated that the bore of the pump was 8 inches; that the piston rod was three inches; that the nut that acted as the jamb-nut on the end of the piston rod connecting the plunger with the piston rod was 4 inches square and projected four inches out onto the piston. Taking all of those obstructions out of the given area of the square of the diameter of the piston of the cylinder and I find it gives a fraction over two and a half gallons to a stroke.

346 Q What is the area?

A. 8 inches in diameter.

Q. And what is the net area?

A. The net area of the whole piston is 768 cubic inches; subtracting from that 200 inches—200 cubic inches—for the obstructions will give me 568 inches as the net result of the piston of the cylinder, and in a standard gallon, wine measure, there is 261 cubic inches, which, if divided, will give a fraction over—dividing the result of 568 cubic inches will give a fraction over two and a half gallons.

(Signed) S. L. WILEY.

Read over to said witness and by him subscribed in my presence this 26th day of June, 1888.

—— ——.

347 Cross-examination by Mr. NORRIS:

Q. Do you consider this river water that you get there at the pump-house adapted to domestic use?

A. I consider that the river water two-thirds of the year is superior to any well water that you could get for domestic purposes.

Q. Did you make a remark to me this noon in front of this building that you would not use that water?

A. I made some statement, but it was a reservation.

Q. Didn't you make the remark to me that you would not use that water?

A. I made it with a reservation.

Q. What was the reservation?

A. At this time of year.

Q. Are you positive about that?

A. Yes, sir.

Q. Were you ever here to see this line of drive-wells tested?

A. Yes, sir.

Q. When?

A. I believe I tested it once here myself in the fall of 1884 with one of my engineers.

(Signed) S. L. WILEY.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

——— ———.

348 LEVI SCHOFIELD, being called as a witness on behalf of the complainant and being duly sworn by the notary, testified as follows:

Direct examination by Mr. UNDERWOOD:

Q. What is your age?

A. 62 years.

Q. And your residence?

A. Grand Haven?

Q. And your occupation?

A. My occupation is superintendent of the Challenge corn-planter works of this city.

Q. How long have you lived in Grand Haven?

A. I came here last—I have lived here at two different times; I came here last in the spring of 1882, I think.

Q. And how long did you live here before then?

A. I came here first in the fall of 1872 and remained here ever since with the exception of two years I was in Iowa.

Q. At any time have you been mayor of the city?

A. I have.

Q. At what time?

A. I think I was in 1884—the spring election of 1884.

Q. From the spring of 1884 to 1885?

A. I think so; I am not positive; I couldn't tell. It seems to me it was 1884. I think it was the spring election of 1884 that I was elected.

Q. How long were you mayor?

A. One year.

Q. Were you mayor at the time of the large fire at the Detroit, Grand Haven and Milwaukee depot here?

A. I was.
Q. In the winter time?
A. Yes, sir.
Q. Were you present at the fire?
A. I was.
Q. What kind of a night was it?
A. It was a very bad, stormy night, snowing and blowing from the west, and cold.

349 Q. Did you see the hydrants of the Grand Haven water works used upon that occasion?

A. I did.
Q. With how many streams—do you know?
A. I don't know as I could tell the number of streams that was connected with the works, I am sure.
Q. With what effect?
A. There was an abundance of water and good pressure on all the streams.
Q. Do you know anything about the hose bursting?
A. Yes, sir.
Q. What about that?
A. The hose burst at different times; I don't know how many times. I saw once or twice where the hose had bursted.
Q. While you were mayor were you present at other fires?
A. Yes, sir.
Q. When the water was used from the Grand Haven water works?
A. Yes, sir.

Mr. NORRIS: You don't claim any ratification by the city because the mayor was present?
Mr. UNDERWOOD: No, sir; I am proving what the fact was.
Mr. NORRIS: You don't mean to say the city accepted the contract because the mayor was present at the fire?
Mr. UNDERWOOD: I don't know as I said that.

Q. You said you were there at some other fires?
A. Yes, sir.
Q. What other fires, if you remember now?
A. I remember one fire on the 4th of July; I think it was Mr. James O'Connell's.

Q. Do you know whether the streams they used then—the
350 stream or streams—came from the Grand Haven water works?

A. There was a stream from the Grand Haven water works, and after awhile the stream that was attracted to my attention that was coming from the Grand Haven water works was tearing shingles from the building, and I followed it down to the hydrant and I found it to be connected with the Wiley works.
Q. Do you remember any other fires?
A. There was a fire over here close by this church over here—somebody's store; I don't remember the man's name.
Q. Did they use the water there?

A. Yes, sir.

Q. With what effect?

A. They put the fire out. It was a very windy night and a very dry time and the building. The fire had got well to going, and I expected to see a general conflagration from the fact that it was so very dry and the wooden buildings near to it; but it was speedily put out.

Q. Do you remember any others?

A. Without reflection I could not itemize them. There are several fires that I have been to.

Q. Both before and after you were mayor were you at fires when the water from the water works was used?

A. I have been, both.

Q. And will you, if there was any instances where there was any lack of pressure or quantity of water—will you mention them?

A. I was never present at any fire where there was not a pressure sufficient for the putting out of the fire. I was at a fire at the time the brewery burned, or what we called the brewery, it used to be. It was a long ways from a hydrant, and the hose was laid a long ways over the snow, and when they first started there didn't seem to be very much pressure; but they soon had pressure
351 enough, so that the fire was extinguished. That is the only place that I have ever been to when there was any lack of pressure.

Q. How long a time was there before they got the pressure?

A. Not but a very few moments.

Q. You have been a water-taker from the Grand Haven Water Works Company?

A. I have.

Q. How long?

A. From the spring of 1884, I think.

Q. From the spring of 1884?

A. I am not positive about the date, but I think that was the time that I took the water.

Q. During the time you have used it for what purposes?

A. I have used it for every purpose that is required for general family use.

Q. What, if any, fault have you had to find with the water?

Mr. NORRIS: That is objected to. The fact that a private consumer has found no fault with the water has no tendency to show that the city has no fault with its service.

The WITNESS: I have some fault to find with the water, after a fire, especially, a fire of any length or duration and where they used the hydrants for some little time. The water to us would have the appearance of river water, and I think it was river water; with that exception I found no fault with the water as a consumer.

Q. What would be the appearance of the water that you would get?

A. It would be yellowish, this river cast.

Q. Muddy?

A. Always muddy, of course.
Q. Carrying considerable sediment stirred up?
A. No, sir; there is no river sediment. I apprehend there is a little different smell to the water when it comes from the
352 river than when it is stirred up in the pipes.
Q. This would continue how long, perhaps?
A. Oh, a few hours.
Q. And pass off?
A. Yes, sir.
Q. Do you know whether that water caused any sickness or not?
A. I don't know that it ever did. We never attributed sickness to it in any shape in our family.
Q. Are you able to say whether or not it was deletarious to health?
A. That is beyond my knowledge. I don't know.
Q. In respect to the quantity of water that you have had and the pressure, the service generally, how has it been?
A. It has always been satisfactory.
Q. What do you say as to Grand Haven, with its population of about 6,000, as to the feasibility or ability of the city to support more than one system of water works?

Mr. NORRIS: That is objected to as incompetent.
The WITNESS: It is my opinion that the city its not able to support any more than one if they are that system of water works.

Q. Are you acquainted with a gentleman here in town, one of the aldermen, named Pfaff, who is or has been one?
A. He was during his lifetime; he is now dead.
Q. Do you remember of having some conversation with him in regard to the treatment that the council proposed to give to what were called the Wiley water works?

Mr. NORRIS: That is objected to as incompetent under the statute which prohibits the testimony of any officer of a corporation with another when it is equally within the knowledge of the party
353 deceased, and it is incompetent in any event. The conversation of one alderman as to what the city proposed to do is not binding upon the city.

Q. Answer the question as to whether you remember the conversation, one or more of them.
A. I remember of conversing with Mr. Pfaff several times in relation to the city water works and the Wiley works.
Q. What I call your attention to is to a conversation in the first place, I think shortly before his election, about his purpose to drive the Wiley water works out of town.
A. Yes, sir.

Mr. NORRIS: That is objected to for the same reason.

Q. Whereabouts did that occur, if it occurred?
A. On the street, on the sidewalk.
Q. When was that?

Mr. NORRIS: The same objection to all this.

The WITNESS: I had several along during the year, but the last that I remember particularly about was before the spring election.

Q. In what year?

A. The spring of 1885, while I was yet mayor, I met Mr. Pfaff upon the street and he says——

Mr. NORRIS (interrupting): The same objection to all this.

The WITNESS: He says: "We are going to put in a council to clean out the Wiley water works, and I am going to be elected alderman on that issue."

Mr. NORRIS: I make the further objection that it appears from the witnesses' testimony that at the time of the conversation Mr. Pfaff was not an alderman.

Q. At any subsequent conversation after he became alderman, on the same subject, give us the time and place as near as you can.

354 Mr. NORRIS: I further object to this testimony. There is no allegation in the bill which it tends to support.

The WITNESS: After the election—I cannot specify the date—Mr. Pfaff met me; it was after the council had taken some action in relation to extending the works. He says, "We have commenced, and if you will just let us alone for a year we will have Wiley so he will be glad to take up his pipes and get out of here." That was while he was alderman.

Mr. NORRIS: The same objection.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

(Signed) LEVI SCOFIELD.

Cross-examination by Mr. SEELEY:

Q. You were well acquainted with Mr. Pfaff, weren't you?

A. Middling well.

Q. And more than middling well, weren't you? You and he were in the habit of having altercations on the streets whenever you met, weren't you?

A. Not very much.

Q. You had a good many altercations with him, didn't you?

A. I don't remember of having but two with him, one here in this hall and one on the street.

Q. Isn't it a fact that Mr. Pfaff, while you were mayor, was habitually lecturing you as to your duties?

A. He was.

355 Q. And you resented it, didn't you?

A. I, in fact, paid no attention to it; I wouldn't talk with him after awhile.

Q. You did on some occasions pay attention to him and talk back to him?

A. Yes, sir; sometimes.

Q. And hot words ensued between you?

A. I don't know that I ever had any hot words with Mr. Pfaff, except once, at the head of these stairs.

Q. It was a notorious fact in this city that Mr. Pfaff was always meddling with that which was none of his business, wasn't it; that was his reputation?

A. Well, I thought so, but I don't know whether the people thought so or not.

Q. Don't you know that it was the common speech and remark of the people; you know that to be a fact, don't you?

A. I have heard that said, and I have heard the same individual say that Mr. Pfaff was the most reliable man there was in Grand Haven.

Q. Wasn't it the common remark of people in the city that Mr. Pfaff was always meddling with that that was not any of his business?

A. It was remarked often.

Q. During these times that you had these conversations with Mr. Pfaff you were consid-rably interested in this water works question, weren't you?

A. I don't know that I was.

Q. Now, isn't it a fact that you have interested yourself very extensively in the water-works matter since Mr. Wiley put in his works?

A. No further than when I was a public officer in the interests of the city; beyond that I have no interest whatever.

Q. Isn't it a fact that because of your great interest in the
356 matter Mr. Pfaff and you got into these conversations?

A. No, sir; I don't think so.

Q. Do you know whether a resolution was passed during your term of office as mayor by the common council forbidding the fire department from using these water works of Mr. Wiley's?

Mr. UNDERWOOD: I object to that as not the best evidence.

A. I think there was.

Q. And yet while you were attending those fires that you speak of you didn't do anything towards ordering or directing the department to obey the order or resolution, did you?

A. No, sir.

Q. Now, at this fire at the depot that you speak of you say there were some hose bursted; do you know, as a matter of fact, that the cars ran over the hose upon that occasion and cut them?

A. The cars did run over some; I didn't see those that they run over, but I was told so.

Q. Do you know that the hose that were cut by the cars running over them were the hose that have been testified to here?

A. I didn't hear any testimony.

Q. About these hose of Mr. Wiley's bursting or the hose connected with his works?

A. I didn't hear any testimony of that.

Q. Don't you know, as a matter of fact, that those were the hose

*the hose* that were connected with the Grand Haven water works, were the hose that were run over by the cars and cut?

A. I couldn't say that I do.

Q. You cannot say as to that?

A. No, sir.

Q. Now, did you at any time while you were mayor report
357 the fact to the common council that you had seen these works used at these fires?

A. I don't know. I think during my term of office I reported to the common council that they should either stop using the Wiley works, and I think I put a message into the council or commenced against them and forbid them tearing up the streets and laying more pipe or made some arrangement or something of that kind. I cannot remember.

Q. When was the time with reference to this occasion that you speak of *of* this message; that this resolution was passed forbidding the use of the works by the fire department?

A. That was the first or second night after I took the chair as mayor.

Q. You say that at times you have seen water that you took from your works that you thought came from the river. I will ask you whether the water on those occasions resembled the water in this jar which I show you in appearance.

(Counsel presents a jar of water to witness, and jar being marked Exhibit "A" for identification.)

A. I have never seen any water look like that from my hydrant.

Q. Have you ever seen any water from your hydrant that looked like that?

(Counsel presents another jar of water to witness, and said jar is marked Exhibit "B" for identification.)

A. No, sir; I have not.

Q. Do you know what time it was that Mr. Pfaff entered upon the discharge of his duties as alderman of this city?

A. I do not.

Q. You know what time the charter election was held that elected him, don't you?

A. It was in April—the first of April.

Q. Did he serve a full year before he died?

A. I don't know.

Q. Don't you know that he did not?

358 A. Mr. Pfaff did not serve his full year; there was some trouble, a quarrel between the council and Mr. Pfaff, and he resigned, I understood; what the facts were I don't know.

Q. How long after he resigned before he died?

A. I don't know that.

Q. Did he die within a year—had the year expired from the time he was elected before he died?

A. I think not.

Q. He died within a year after he was elected, didn't he?

A. I think so.
Q. Do you know how he came to his death?
A. No, sir; not of my own knowledge.
Q. You know what the report was, don't you?
A. I did.
Q. What was it?
A. That he committed suicide by shooting himself.
Q. He shot himself.
A. Yes, sir.
Q. Don't you know that it was commonly stated in this city that he was crazy for a considerable length of time before he killed himself?
A. I know that people have made the remark that they believed him to be crazy, and I know also that he was not considered crazy by the common speech of people.
Q. You know that it was remarked frequently that he was crazy by persons?
A. I have heard him called cranky frequently.
Q. Haven't you frequently heard him called crazy?
A. I think I have called him crazy. I don't know that I ever heard anybody else call him crazy.
Q. You called him crazy?
A. Yes, sir.

359 Q. Did you call him crazy about the time that you had this conversation with him when he said he was going to clean the Wiley water works out?
A. I never considered Mr. Pfaff crazy in that sense of the word.
Q. That does not answer the question?
A. I might have called him crazy.

(Last question read by the stenographer.)

A. I don't know that I ever did, and I don't know but I might have called him crazy; I cannot say. I wish to be understood here that I do not and I never considered Mr. Pfaff crazy, although I might have called him crazy in the excitement.

(Signed) LEVI SCOFIELD.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

——— ———.

360 GEORGE W. STICKNEY, being called as a witness on behalf of the complainant and being duly sworn by the notary, testified as follows:

Direct examination by Mr. UNDERWOOD:

Q. What is your age?
A. 49.
Q. And your business?
A. Cashier of the First National Bank of Grand Haven.
Q. How long have you been?

A. 17 years.
Q. You reside in Grand Haven?
A. Yes, sir.
Q. For how long?
A. About 20 years.
Q. You are also treasurer of the Grand Haven water works?
A. I believe so; yes, sir. I collect the water rents and disburse them.
Q. Do you know what the income of the Grand Haven water works during the year from April 1st, 1887, to April 1st, 1888, was from water-takers?
A. $2,977—I have just taken it from my books—and some cents.
Q. What were the disbursements?
A. I am hardly competent to say what the disbursements were. As far as my accounts were concerned the disbursements have been the receipts. I have simply received the money and paid it out on vouchers from the superintendent of the works.
Q. Have you any means of knowing the different accounts upon which you paid it?
A. No, sir.
Q. There has been no surplus over and above the vouchers of the superintendent?
361 A. No, sir; I think I can say positively that there has been nothing paid out of the receipts except for the expenses of the works here.
Q. Do you know whether the receipts have been enough to pay all the expenses or not?
A. My impression is they have not. I know Mr. Wiley has been drawn upon occasionally for funds.
Q. You have been a water-consumer here?
A. Yes, sir.
Q. For how long?
A. Since the works were started.
Q. You used it for what purposes?
A. I have not used it for culinary purposes or for drinking, because I have had very fine water from my own place.. I have only used it in the hydrant.
Q. You never put it into the house?
A. No, sir; not so as to experiment as to that.
Q. Have you seen the water upon your place so that you can form some judgment upon it?
A. Well, I should not be able to from that, but we have occasionally used it in the house. I am not so competent to speak as a great many other takers are here, because we have not used it for culinary purposes.
Q. Have you seen it in use around town at other places?
A. I have seen it; yes, sir. I have seen it and have been interested in watching it and experimenting with it somewhat.
Q. You have experimented with it?
A. Nothing more than to look at it and examine it and ask ques-

tions about it; not enough to give me any extraordinary intelligence in regard to it.

Q. So far as your observation has gone what do you say about the water that has been furnished, generally?

362 A. Well, with the exception of last summer during the extreme drouth, when every city about us was without water, it has been good, bright, and clean always; better than water in average towns about.

Q. You are somewhat acquainted with water in other towns about you?

A. I have been in Grand Rapids and drank the water there and smelt of it, and I have been at Kalamazoo and seen the lawns there, and I have seen the water at Muskegon and read in the newspapers about it.

Q. With the exception of this period last summer during this extreme drouth the water was good?

A. As far as my observation extends it has always been good.

Q. And even better than surrounding cities?

A. As far as my observation, of course, that is limited to hearsay.

Q. What was the season last summer as to drouth?

A. A very dry season, indeed.

Q. And as to ordinarily dry seasons how was it?

A. I think it was a remarkably dry season for this vicinity.

Q. How was it as to the drouth being short or of long duration?

A. Well, my impression is just from memory that it was something; nearly two months that we had no rain to speak of; none that swelled the streams.

(Signed) GEORGE STICKNEY.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

———.

363 Cross-examination by Mr. NORRIS:

Q. You say you have not been using this water for culinary purposes in your family?

A. No, sir; only on occasions when my other fixtures gave out for a short time. I am not so competent to speak as hundreds of other takers in the city upon that question.

Q. On these few occasions?

A. The water has always been bright and clear when I had occasion to use it.

Q. What other uses did you make of it? Did you use it for lawn-sprinkling?

A. That is all, sir.

Q. How many times have you been to the other cities to examine the waters there?

A. I could not tell you. I have not examined the water closely. I have seen the Grand Rapids water, and I saw it last season and I saw it last winter. I do not wish to pose as an expert upon that question at all, because I am not one.

Q. Your knowledge, then, upon the subject is very slight?
A. Very.
(Signed) GEORGE STICKNEY.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

— —.

364 AUGUSTUS M. COSGROVE, being recalled as a witness on behalf of the complainant, testified as follows:

Direct examination by Mr. UNDERWOOD:

Q. In asking you about the expenditures this morning I don't think I asked you about the fuel account. What fuel did you burn?
A. We burned pine slabs.
Q. For ordinary work how many cords did you use a day?
A. About two cords a day.
Q. How much did that cost you?
A. It cost us a dollar and a half a cord.
Q. And in case of fire is there anything extra?
A. When we worked very hard upon a fire it is about half a cord an hour extra.
Q. Have you any expenditures for oil?
A. Yes, sir.
Q. How much?
A. Well, in the neighborhood, I should think, of $100 a year.
Q. That is for lights and oil for the engine both?
A. Yes, sir.
Q. And for repairs?
A. Yes, sir; I think about $100 a year for repairs; it would be more or less.
Q. You know Mr. Stickney, the treasurer?
A. Yes, sir.
Q. Did you hear his testimony that he paid the money out on your vouchers?
A. Yes, sir.
Q. What were those vouchers for? What did you draw on him for?
A. For labor.
Q. What else?
A. And repairs and oil.
Q. Fuel?
A. Fuel, what I didn't draw from Mr. Wiley.
Q. And does that include the salaries of the officers? Does that include your salary?
A. Yes, sir.
(Signed) A. M. COSGROVE.

Read over to the said witness and by him subscribed in my presence this 26th day of June, 1888.

— —.

Mr. UNDERWOOD: Did you find that letter of January 17th?

Mr. SEELEY: We never received any such letter, and hence, of course, cannot deliver it up.

365 The Circuit Court of the United States for the Sixth *District* and Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST CO.
*vs.*
CITY OF GRAND HAVEN, ALVAH L. HOLMES, and THE GRAND HAVEN WATER WORKS.

Stipulated in the cause by and between counsel for the respective parties that the time for taking proofs herein be, and the same is hereby, extended to and including the 15th day of October next. It is farther stipulated that this cause may be placed upon the calander of the October term of said court, if desired, in the same manner and with like force and effect as if the proofs had been closed before the commencement of said October term, but no hearing to be had before said October 15th.

August 17th, 1888.

NORRIS & NORRIS,
*Sol'rs for Def't The City of Grand Haven.*
W. A. UNDERWOOD &
A. HOWELL,
*Sol'rs for Compl't.*

366 Grand Haven Water Works
to
The Boston Safe Deposit Co. as Trustee.

Received for record February 14th, A. D. 1884, at 11.45 o'clock a. m.

——— ———, *Register.*

Whereas, at a meeting of the directors of the Grand Haven water works, a corporation organized as hereinafter stated, held at the office of George W. McBride, in the city of Grand Haven, Michigan, Ottawa county, November the 8th, A. D. 1883, all the directors representing all the stock of said corporation present.

And whereas, at said meeting the following resolutions were duly passed by an unanimous vote of the directors of said corporation, viz:—

That whenever it is deemed expedient or necessary, the president and secretary of this corporation be and they are hereby authorized and directed to execute and issue the bonds of this corporation in the sum of seventy ($70,000) thousand dollars, secured by a first mortgage or deed of trust upon all the present and future property, rights and privileges, franchises and assets of the corporation, both that is now owned or may hereafter be acquired by it, said bonds to be of even date with the said mortgage, and be payable

on the fifteenth day of January, 1904, with interest at the rate of six per cent. per annum, payable semi-annually at the office of the "Boston Safe Deposit and Trust Co.," in the city of Boston, Mass., said bonds to have proper coupons attached, to be of the de-
367 nomination of one thousand dollars each numbered from number one to and including number seventy (70) and shall be redeemable by this corporation at the option of this corporation at any time after five (5) years from this date, upon said corporation giving the holders thereof sixty (60) days' notice by advertisement thereof three (3) times in some prominent Boston, Mass., newspaper, which shall be deemed good and sufficient notice.

And the president of the corporation and the secretary thereof are hereby authorized and directed to execute the mortgage or deed of trust necessary to secure said bonds.

Resolved, further, That the president or treasurer of this corporation *are* hereby authorized and directed to sign orders upon the Boston Safe Deposit and Trust Company, of Boston, Mass., in pay-ent for work and material as the work of construction progresses in compliance with the contract or any future contract or contracts that may be made with any one.

And whereas, the said Grand Haven water works has entered into a contract with the S. L. Withey Construction Company of Greenfield, Mass., a corporation organized under the laws of Massachusetts, to construct the water works of this corporation, contemplated by its contract with the city of Grand Haven, Michigan, *it* the date of November the 8th, 1883, and this board deems it necessary in order in part to pay for the construction of said works to issue the bonds of this corporation to the amount of seventy thousand ($70,000) dollars, to be secured by a first mortgage or trust deed on all its lands, works, pipes, mains, hydrants, assets, and property, to the Boston Safe Deposit and Trust Co., of Boston, Mass., as trustees, therefore,

368 Resolved, That this corporation, the said Grand Haven water works, issue seventy thousand ($70,000) dollars of bonds; that said bonds be drawn payable to bearer; that they may be issued of even date with the mortgage hereinafter mentioned, payable on the fifteenth day of January, 1904, and bearing six (6) per cent. interest per annum, payable semi-annually, both principal and interest at the office of the Boston Safe Deposit and Trust Co., of Boston, Mass., each of said bonds to be of the denomination of one thousand dollars ($1,000) and to have proper coupons attached for each semi-annual installment of interest, and to be numbered consecutively from one to and including seventy (70) and which bonds shall be redeemable by this corporation at any time after the expiration of five (5) years after the execution of said bonds and mortgage at the place of payment at the option of the corporation, giving to the holders of such bonds sixty (60) days' notice by three (3) publications thereof in some prominent newspaper in Boston, Mass.

Resolved, That such bonds, so to be issued, shall be engraved and shall be signed by the president and countersigned by the secretary

of this corporation, and attested by its common seal, in substantially the following form:

UNITED STATES OF AMERICA.

No. —. $1,000.

Grand Haven water works.

STATE OF MICHIGAN, *City of Grand Haven.*

*Six Per Cent. Bond.*

369 On the fifteenth day of January, A. D. 1904, for value received Grand Haven water works promises to pay to bearer one thousand dollars, with interest at the rate of six per cent. per annum, payable semi-annually on the fifteenth days of January and July, on presentation and surrender of the coupons hereto annexed, as they respectively become due: principal and interest payable in lawful money of the United States at the Boston Safe Deposit and Trust Company, in the city of Boston.

Grand Haven water works reserves the right to pay this bond at any time after five years from its date, on giving sixty days' notice, and a notice published three times in a newspaper in Boston, Mass., that this bond is called in, shall be sufficient, and after the date at which this bond shall be by such notice called in, interest shall cease.

This bond is one of a series of seventy of like tenor and date, amounting to the sum of seventy thousand dollars, first mortgage bonds, issued by the Grand Haven water works, and secured by a duly authorized executed and recorded deed of trust, covering the franchises and property and income, including water rents, due and to become due, of said incorporation, made to Boston Safe Deposit and Trust Company, of Boston, Massachusetts, trustee.

In witness whereof, "Grand Haven water works" has caused this negotiable bond to be executed by its president, who covenants that he is duly authorized in this behalf, and countersigned by its secretary, and its corporate seal to be hereunto affixed, this — day of ——, A. D. 1883, in the city of Grand Haven, Michigan.

—— ——, *President.*

Attest: —— ——, *Secretary.*

370 Resolved, That to secure the payment of the principal and interest of the said bonds and all lawful expenses incurred in the collection thereof, this corporation shall execute its mortgage or deed of trust to the Boston Safe Deposit and Trust Company, of Boston, Mass., as trustee of and upon the lands, franchises, rights and privileges, property, assets, income and effects of this corporation, now owned or hereafter to be acquired by it, whether real, personal or mixed, and that such mortgage or deed of trust shall contain a covenant of further assurance by which this corporation shall covenant and agree that this corporation will hereafter make, exe-

cute and deliver to said trustee such other and further conveyances, mortgages and instruments in writing as said trustee shall reasonably deem necessary to fully carry out the intent and meaning of said first mortgage or deed of trust, and as will secure to said trustee the water rents hereafter pledged, and especially that on the request of said trustee, it will execute and cause to be recorded at its own expense further mortgages or deeds of trust to said trustee, of such property as it may acquire after the date hereof, and as may be necessary fully to supplement and convey to said trustee all the security for said bonds intended or meant by said first mortgage to be conveyed, and as will enable said trustee, in case it may be deemed necessary to do so, to take immediate possession of all mortgage property, and sue for, collect and receipt for any water rents which may hereafter become due this corporation from any and all persons and corporations, including the city of Grand Haven, Michigan, under its contract, which said water rents are hereby pledged to said trustee: such further mortgages or deeds of trust to be
371 in all respects like the said mortgage or deed of trust, first to be executed and be in confirmation of and supplemental to the lien of such first executed mortgage on such hereafter-acquired property intended to be conveyed by the said mortgage first executed, excepting that nothing in these resolutions or in said mortgage contained shall preclude said trustee from demanding and being entitled to such instruments in writing as shall vest in it possession of the mortgaged premises, or of any other mortgaged property, real or personal, and the title to the income of, or water rents to become due to this corporation, and all said mortgages shall contain the usual covenants of seizure and warranty, and shall provide for the payment of expenses of foreclosure and sale; and further, that the whole of the principal of said indebtedness secured hereby shall become due and payable and the said trustee or its successor may proceed to foreclose the same for the whole amount of such indebtedness whenever default shall be made in the payment of any installment of interest due for thirty days after the same shall become due and payable.

Resolved, That all the water rental to become due to this corporation from the city of Grand Haven, under its contract with this corporation, of the date of November the 8th, 1883, or any other or future contract with said city during the continuance of the indebtedness evidenced by said bonds, is hereby pledged to said trustee for the payment of the interest upon such indebtedness.

Resolved, That the said bonds having been executed, and the said first above described mortgage having been duly executed, de-
372 livered and recorded, said bonds shall be deposited with the said Boston Safe Deposit and Trust Company, and the said trustee, subject to the order of and to be negotiated and sold by James A. Norton, the president of this corporation and the financial agent thereof, and he, the said Norton, is hereby authorized to negotiate and sell the whole or such part of said bonds as he shall deem necessary for the purposes of the corporation, upon the best terms he can obtain therefor, and the

monies received from such sale of said bonds shall be deposited with said trustee, subject to the order of the president, James A. Norton, or the treasurer, W. C. Harris, in payment for construction as the same progresses under such contract or arrangement in regard thereto, as the financial agent shall make with the said trustee, the said Boston Safe Deposit and Trust Company.

Resolved, That each of the coupons to be attached, "to *be* bonds heretofore authorized to be issued," respectively on each bond shall be in the following form, viz:

$30. GRAND HAVEN, MICH., —— —, 1883.

Grand Haven water works promises to pay to bearer the sum of thirty dollars at the office of the Boston Safe Deposit and Trust Company, in the city of Boston, Mass., for six months' interest due on the fifteenth day of —— on bond No. —.

JAMES A. NORTON, *President.*

373 Resolved, further, That all mortgages or deeds of trust shall provide for the relief of the trustee from its trust in case of its desire to be so relieved, and the appointment of a successor, in case of a vacancy in the office of trustee should exist, and such other regulations concerning the exercise of the powers of such trustee as the president of this corporation, may deem best to insert in the said mortgage and as are not inconsistent with resolutions heretofore passed, and

Resolved, further, That all the water rents to become due to this corporation from all persons and corporations other than the city of Grand Haven, or so much thereof as shall be necessary to make up any deficiency in the amount of interest which may at any time be due upon such bonds over and above the amount received by such trustee from such water rental, from the city of Grand Haven, or which may be over and above the amount of such interest, which said rental from the city of Grand Haven will pay, are hereby pledged to said trustee for the payment of the interest upon such indebtedness.

Resolved, further, That the date upon which said seventy thousand ($70,000) dollars of bonds heretofore mentioned shall be issued and the date of the said mortgage or trust deed, securing the same shall be ——, A. D. 1883.

374 And, whereas, at a meeting of the stockholders of the Grand Haven water works, held at the office of George W. McBride, in the city of Grand Haven, Michigan, on the ninth day of November, 1883, all the stock being present and voting, it was

Resolved, That the stockholders do hereby endorse and approve the action of the board of directors of this corporation, in part and in whole, relating to the issuing of seventy thousand ($70,000) dollars in bonds secured by a mortgage upon all the property, rights, franchises and privileges of this corporation now owned, or that may be hereafter acquired by it, for the purpose of borrowing money as defined in resolutions upon pages forty-eight (48) forty-nine (49) fifty (50) fifty-one (51) fifty-two (52) fifty-nine (59) and sixty (60) of

this record book, and they are empowered and authorized to determine all matters relating to form of bonds, mortgages, or trust deeds, date of issue and execution of same, and all matters and details therein.

And, whereas, the said Grand Haven water works is a corporation organized under the provisions of chapter 128 of the Compiled Laws of the State of Michigan for the year 1871, as amended, entitled, "Companies for the introduction of water into towns, cities, and villages," being chapter 84 of Howell's Annotated Statutes, and is authorized by law to issue bonds or other evidences of indebtedness, to borrow money and to execute mortgages or trust deeds, and the said Grand Haven water works has complied with the provisions of law in that behalf, so that it is empowered and authorized to borrow money, to issue the bonds mentioned in said resolutions
375 and hereinafter, to make this mortgage or deed of trust and is desirous of negotiating its bonds to the amount of seventy thousand ($70,000) dollars, and for the purpose of securing the payment thereof, desires to execute this mortgage or deed of trust to the said Boston Safe Deposit and Trust Company, of Boston, Mass., as trustee for the holders of said bonds.

Now, therefore, this indenture, made this thirteenth day of November, A. D. 1883, by and between the said Grand Haven water works, so being such corporation as aforesaid, of the first part, and the said Boston Safe Deposit and Trust Company, of Boston, Massachusetts, as trustee for the holders of said bonds, of the second part: witnesseth:

That the said party of the first part, in consideration of the premises, and forasmuch as it has executed seventy (70) negotiable bonds, numbered consecutively from one (1) to seventy (70) inclusive, each of the denomination of one thousand ($1,000) dollars, due January 15th, (1904) ninteen hundred — four, bearing interest at the rate of six (6) per cent. per annum, payable semi-annually on the fifteenth days of July and January on the presentation and surrender of the coupons hereto annexed and hereinafter mentioned, as they respectively become due, both principal and interest payable in lawful money of the United States at the office of the Boston Safe Deposit and Trust Company, the said second party, each bond having forty (40) coupons attached thereto, numbered consecutively from one (1) to forty (40) inclusive, and each coupon being the promise of the first party to pay the semi-annual instalment
376 of interest therein mentioned and the said coupon number one (1) being the promise of the first party to pay the interest therein mentioned July 15th, 1884, and each of the said bonds and coupons being in the form set out herein, in the recital of the resolution of the board of directors of the first part hereto, and is desirous of selling and negotiating and selling the same, and of securing the payment thereof, for the purpose of so doing, hath granted, bargained, sold remised, released, enfeoffed, and confirmed, and by these presents doth grant, bargain, sell, remise, release, enfeoff, alien, and confirm unto the said party of the second part, its successors and assigns, all *the* singular, that piece or parcel

of land situate, lying and being in the city of Grand Haven, county of Ottawa, State of Michigan, and described as follows, to wit: A part of the southwest fraction of section (22) twenty-two, township eight (8) of range sixteen (16) west, according to United States survey, bounded as follows, that is to say, commencing at a point (330) three hundred and thirty feet east and (66) sixty-six feet north of an iron stake at the intersection of Beech Tree street and Washington avenue, running thence east at right angles with said Beech Tree street (330) three hundred and thirty feet, thence south parallel with said Beech Tree street (132) one hundred and thirty-two feet, thence west at right angles with said Beech Tree street (330) three hundred and thirty feet, thence north (132) one hundred and thirty-two feet to the place of beginning, containing one acre of land, with all the buildings and appurtenances thereon and thereto belonging, together with all the wells, buildings, erections, machinery, pipes, and works of whatsoever kind or description, now on said premises or hereafter to be placed thereon, and
377 all and singular the hereditaments and appurtenances hereunto belonging, or in anywise appertaining, and also all and singular the works, pipes, mains, hydrants, stop gates, connections and plant of said the party of the first part now in said city of Grand Haven in process of construction or hereafter to be constructed or acquired; and all the income, rents, issues and profits to be received therefrom and also all the land, property and assets of said Grand Haven water works, of whatever kind and description, wherever situate, now owned by it or hereafter to be acquired:

And all the franchises, rights and privileges of said first party now held and enjoyed by it or hereafter to be acquired, forever:

To have and to hold the above-described premises, property and assets, franchises, rights and privileges, to the said second party, its successor or successors and assigns forever; in trust, nevertheless, for the uses and purposes hereinafter mentioned.

And the party of the first part, for itself, its successors and assigns, for a valuable consideration, the receipt whereof is herein and hereby confessed and acknowledged, doth covenant, grant, bargain, and agree, to and with the said second party, that it is well seized of the above-granted franchises, rights and privileges, property and assets, of a good sure and indefeasible title thereto; that the same are free and clear from all incumbrances and that the same in the quiet and peaceable enjoyment of the said party of the second part, its successors and assigns, the said party of the first part, its successors and assigns, against all and every person lawfully claiming or to claim the same or any part thereof, shall forever warrant and defend.

378 And for a further valuable consideration, to it in hand paid by said second party, receipt whereof is hereby confessed and acknowledged the said party of the first part, for the further assurance of the said party of the second part, and the holders of such bonds, doth convey, grant, bargain and agree, with the said party of the second part, its successors and assigns, that it will and its successors and assigns shall make, execute and deliver to said party of the second part,

its successors and assigns, all such other and further conveyances, mortgages and instruments in writing as said party of the second part — reasonably deem necessary to fully carry out the intent and meaning of this mortgage, and as will secure to the said parry of the second part the water rents, incomes, issues and profits hereafter and hereby intended to be conveyed, and especially upon request of the said party of the second part, that it will, and its successors and assigns shall, execute and cause to be recorded at its own expense, all such further mortgages or deeds to said second party of such property, rights, privileges and franchises, as it may require after the date hereof, and as may be necessary to supplement and make complete this mortgage, and to fully convey to said party all the security for said bonds intended or meant by this mortgage to be conveyed, and as will enable said second party, its successors and assigns, in case it or they shall deem it necessary so to do, or in case of any default entitling it so to do, to sue for, collect and receipt for the water rents which may hereafter become due to this corporation from any source whatever, or which may become due to its successors and assigns, and that such further mortgages or deeds of trust shall be in all respects as nearly as may be, like this mortgage and
379 to be in confirmation of and supplemental to the lien of this mortgage on such hereafter acquired property intended to be conveyed by this mortgage.

Provided, always, and these presents are upon these express conditions, that if the said party of the first part shall and do well and truly pay or cause to be paid to the holders thereof all and singular the said seventy (70) bonds hereinbefore mentioned, which shall be at any time outstanding and negotiated, principal and interest, at the several times therein mentioned for the payment thereof, according to the terms and provisions of said bonds severally and the coupons thereto respectively attached *thereto*, then these presents and said bonds and the coupons thereunto belonging, shall cease and be null and void. And it is hereby expressly agreed, that should any default be made in the payment of said interest or any part thereof on any day when the same is made payable as above expressed, and should the same remain unpaid and in arrear for the space of (30) thirty days, then and from thenceforth, that is to say, after the lapse of (30) days, so much of the aforesaid principal sum of seventy thousand ($70,000) dollars as remain- unpaid, with all arrearages of interest thereon shall, at the option of the said party of the second part, its successors and assigns, become and be sue and payable immediately thereafter, although the period above and in said bonds limited for the payment thereof may not have expired, anything hereinbefore or in said bonds contained to the contrary thereof in anywise notwithstanding.

And it is also agreed, that at any time the said trustee, the second party hereto, its successors and assigns, shall deem the security
380 for the payment of the debt evidenced by said bonds and coupons is impaired or in danger of being impaired, or that there is any reasonable probability that the next installment of interest on said indebtedness will not be fully paid, or if at any time any interest

or any part of the interest on any of said bonds shall be in arrears, it is hereby authorized and empowered to take, receive, sue for and collect the water rents hereafter to become due and payable to said first party, its successors and assigns, from the city of Grand Haven, under the present contract between the said first party and said city of Grand Haven, or any other, further or future contracts between said first party, its successors and assigns, and the said city of Grand Haven, by first giving said first party and said city of Grand Haven five days' notice of its intention to do so: and in case such rental from the said city of Grand Haven shall not be sufficient fully for the purposes aforesaid, then the said second party, its successors and assigns, is hereby authorized upon like notice as aforesaid, to said first party and to the person or persons owing such water rental, to take, receive, sue for, prosecute and collect all other water rents due or to become due to said first party its successors and assigns, from any other person or persons or corporations whatsoever, and apply the same for the purposes aforesaid, or so much thereof as shall be necessary therefor.

And it is further agreed that the said Boston Safe Deposit and Trust Company or any future trustee, under this indenture, may assign and discharge itself or himself of the trusts herein created by notice in writing to the party of the first part sixty (60) days
381 before said resignation shall take effect or by such shorter notice as the party of the first part may deem adequate and upon proper accounting in respect to its or his trusteeship and upon the execution of the conveyances hereinafter required.

And any vacancy in the office of any such trustee, however or whenever occurring, may be filled by appointment by the party of the first part, concurred in by a majority interest of the holders of bonds hereby secured, which appointment shall be in writing and to be filed with the new trustee and the party of the first part. And thereupon all the powers and authorities herein granted to or conferred upon the party of the second part and all the rights, interests and estates herein conveyed to said party of the second part, and requisite to enable it to execute the purposes of these trusts, shall become vested in the new trustee appointed as above, without any further conveyance; but any trustee so resigning or vacating its or his office in any manner, shall execute such deeds of conveyance or other instruments as may be necessary to vest all its or his interest in said trust property in said new trustee upon the trust herein expressed.

And in case it may at any time hereafter prove impracticable to fill in manner as aforesaid any vacancy which may have occurred in said trust, the vacancy may be filled and a new trustee appointed by the circuit court for the county of Ottawa, in chancery, of the State of Michigan, upon application of any party interested, and after such notice as the court may order; such appointment by said court shall vest the mortgaged premises in the trustee so appointed as fully and with the same trusts and
382 powers as if herein and hereby appointed. And as part of said decree of appointment said court may direct any such con-

veyance by any outgoing trustee, as may be deemed necessary or convenient.

The party of the second part hereby accepts the trust aforesaid, and agrees faithfully to execute the same, but upon the following terms and conditions, which are mutually agreed upon by the parties interested herein, to wit:

That the reasonable charges and expenses of executing the trusts, including a reasonable compensation to the trustee, shall be paid by the party of the first part, or otherwise out of the trust estate on which they are hereby charged; and any trustee acting hereunder shall not be required to take measures for the enforcement of this mortgage or to sell the mortgaged premises under the power herein given unless furnished with a reasonable amount of money for these purposes, and shall be indemnified against the loss, trouble and expense such trustee may be put to in so doing.

And that in the performance of the duties of the trust, the trustee shall be invested with full powers to submit to arbitration all questions of law or fact, and all controversies arising in the execution of the trusts, and to compromise and adjust the same on such terms as the trustee shall deem reasonable; and that any trustee hereunder shall be answerable only for gross negligence and wilful default, and shall not be responsible for any omissions or wrongful acts of any counsel, agents or attorneys employed by such trustee for any of the purposes aforesaid when selected in good faith.

But in case of the non-payment of the said bonds and the
383 coupons thereon, as they respectively become due or any of the same or of the several sums of money evidenced thereby or any part thereof, principal or interest, at the time, in the manner and at the place above and in said bonds and coupons limited and specified for the payment thereof, then and in such case it may be lawful for the said party of the second part, its successors and assigns, as such trustee as aforesaid, and the said party of the first part doth hereby empower and authorize the said party of the second part, its successors and assigns, as such trustee as aforesaid, to grant, bargain, sell, releas-, and convey the rights, franchises, privileges, premises, assets and property, with the appurtenances hereby mortgaged, or intended or meant to be, at public auction or vendue and on such sale, to make and execute to the purchaser or purchasers, his, her, its, or their heirs, successors and assigns forever, good, ample and sufficient deed or deeds of conveyance in law, pursuant to the statute in such case made and provided; and out of the proceeds thereof to pay the holders of said bonds, if so much there shall be realized on said sale, principal and interest due upon said bonds, and the coupons thereto attached, after deducting the lawful costs and charges of such foreclosure and sale, rendering the surplus monies, if any there should be, to the said party of the first part, its successors and assigns.

In witness whereof the said Grand Haven water works has

caused this mortgage to be executed by its president, who covenants that he has sufficient and lawful authority in that behalf.

{Seal of the Grand Haven Water Works, Incorporated 1883, Grand Haven, Mich.}

384 And to be countersigned by its secretary and the common seal to be affixed hereto, at the city of Grand Haven, Ottawa county, State of Michigan, this 30th day of November, 1883.

JAMES A. NORTON, *President.*

T. A. TAYLOR, *Secretary.*

Countersigned in presence of—
WM. GATFIELD.
G. FERGUSON.

STATE OF MICHIGAN, *County of Ottawa,* } *ss:*

On this 14th day of February, A. D. 1884, before me, a notary public in and for said county, personally appeared James A. Norton and T. A. Taylor, known to me to be the president and secretary respectively of the Grand Haven water works, and severally and respectively acknowledged that they had, as president and secretary of said Grand Haven water works and as its act and deed, executed the foregoing mortgage and affixed thereto the common seal of said corporation, and that the foregoing mortgage was and is the free act and deed of said corporation.

CHAS. T. PAGELSO,
[SEAL.] *Notary Public, Ottawa County, Mich.*

The Boston Safe Deposit and Trust Company, party of the second part to the foregoing indenture, has in witness thereof caused the same to be signed in its name and behalf, its corporate seal to be affixed to the same by its president, Frederick M. Stone, hereunto duly empowered, this thirtieth day of November, in the year eighteen hundred and eighty-three.

[Seal of the Boston Safe Deposit and Trust Co.]

385 BOSTON SAFE DEPOSIT AND TRUST CO.,
By FREDERICK M. STONE, *Pres't.*

In the presence of—
BENJAMIN F. BROOKS.
HENRY G. NICHOLS.

COMMONWEALTH OF MASSACHUSETTS, *Suffolk,* } *ss:*

On this ninth day of February, A. D. 1884, before me, a notary public in and for said county, personally appeared Frederick M. Stone, known to me to be the president of the Boston Safe Deposit and Trust Company, and acknowledged that he had as president of said Boston Safe Deposit and Trust Company and as its act and

deed executed the foregoing mortgage and affixed thereto the corporate seal of said corporation, and that the foregoing mortgage was and is the free act and deed of said corporation.

[SEAL.] HENRY G. NICHOLS,
*Notary Public.*

COMMONWEALTH OF MASSACHUSETTS, *Suffolk*, } *ss:*

CLERK'S OFFICE OF SUPERIOR COURT.

I, Jos. A. Willard, clerk of the superior court for said county, the same being a court of record, do hereby certify that Henry G. Nichols, Esq., whose name is subscribed to the proof or acknowledgment of the annexed instrument in writing, was at the time of taking such proof or acknowledgment a notary public in and for the said county, duly commissioned, sworn, and authorized to take the same; and, further, that I am well acquainted with his handwriting, and verily believe that the signature to said proof or acknowledgment is genuine; and, further, that the annexed instrument is executed and acknowledged according to the laws of said Commonwealth.

386

Witness my hand and seal of said court, at Boston, in said county and Commonwealth, this 11th day of February, A. D. eighteen hundred eighty-four.

[SEAL.] JOS. A. WILLARD, *Clerk.*

STATE OF MICHIGAN, *County of Ottawa*, } *ss:*

I, William F. Kelly, register of deeds in and for said county, do hereby certify that the annexed and foregoing is a true, correct, and compared copy of a mortgage recorded in Liber 26 of Mortgages, on page 186, &c., of the records of this office, and it is a correct transcript therefrom and of the whole of such original record.

Given under my hand and official seal, at the city of Grand Haven, this 18th day of September, A. D. 1888.

[SEAL.] WILLIAM F. KELLY,
*Register, Ottawa County, Michigan.*

387 JOSEPH DOUGLAS, being called and duly sworn by the notary, testified as follows:

Direct examination by Mr. SEELEY:

Q. What is your age?
A. 44 the 6th day of next October.
Q. Where do you reside?
A. My family reside in Grand Haven.
Q. Your home is here?
A. My home is here.
Q. How long have you resided here?
A. Eight years.

Q. What is your occupation?
A. Engineer.
Q. How long have you been such?
A. I have been such for twenty-five years.
Q. Are you acquainted with the Grand Haven water works?
A. Yes, sir.
Q. State whether at any time you were in their employ.
A. I was.
Q. When?
A. I was in their employ two or three years ago this summer.
Q. Do you remember the time when the Grand Haven water works were started?
A. Yes, sir.
Q. State whether you went into their employ after their starting.
A. Yes, sir.
Q. As what?
A. As engineer.
Q. For how long did you continue in their employment as engineer?
A. Two years; about that; it might have been a month or so short of two years.
Q. From the time you commenced in their employ as engineer state what you did with reference to making connection with the river—suction.
A. Well, at first, when we first started up the works, for about a period of about three or four months, we used spring water;
388 at least water that we got from the driven wells, and after that time we had to occasionally take water enough from the river to make up the deficiency that was in the driven wells to keep our pumps running. At first we didn't have to take but a small amount of river water, but as the weather in the summer season got drier or *and* hotter we had to take more; perhaps we got to taking nearly one-third river water during the month of July and part of August to keep the supply of water big enough to keep our pumps running, and in the fall, when the fall rains came on, we managed to use a little less of river water, and at the fires where we had to pump more than twenty minutes we had to take water from the river, and when I went to the river for water I took the whole of it from the river.
Q. What was your custom in regard to connecting with the river for fire purposes—that is to say, when there was a fire?
A. When a fire broke out I generally started up the pumps, got up the pressure, and after pumping ten or fifteen minutes I would go and open up the river suction and take the water from the river.
Q. That is, wholly?
A. Wholly.
Q. What have you to say as to that practice continuing during the two years you were in the employ of the works?
A. That is the way we always did the whole two years I was there.

Q. During these first six months that you made connections with the river, as you have stated, state whether you received any orders from the superintendent or Mr. Wiley or any one in authority to do that.

A. When I saw how the water was getting short Mr. Van Patten was superintendent of the works here, and Mr. Wiley he gave me
389 orders to obey his instructions. I says to him, "What shall I do in case our spring water gives out?" and he made me no answer, and I was no better off after I asked him that I was before.

Q. What did you do then?

A. When the time came that I had to go to the river I went there and notified him of the same and he says, "Well, if we could not do any better it was all right."

Q. After six months had expired from the time of starting the works what was your custom in regard to drawing from the river for the purpose of supplying the people in this city with water?

A. I always got the deficiency from the river, and during this hot weather I dare say it reached one-half of the amount of water that I pumped.

Q. What time of day, if any particular time, that you pumped from the river especially?

A. Well, it was all day, but if there was any difference we took a little more nights than we did daytimes to allow our spring water to fill up.

Q. Where did you put this water that you pumped during the day and evening?

A. Put it right into the mains.

Q. Did you have any other reservoir that you filled up?

A. We had a reservoir that we kept water into, not a very great amount; we kept it in case of fire; if we lost our suction we would have something to prime our pumps with, and if we had to pump very hard we would not have so much of a suction; we would not need so much tanking to pump from the reservoir as from the river.

Q. Where did you get the water you put into the reservoir?

A. We got it from the springs and some from the river.

Q. What portion do you think you obtained from the river?
390 A. I think after emptying the reservoir at one time, at a fire, we replenished it again with river water.

Q. Describe this reservoir.

A. The reservoir lays on the south side of the pump-house; I forget just the size of it—about twelve feet deep, built of sand and lined inside with clay and gravel.

Q. What is its diameter—the surface diameter?

A. I don't remember.

Q. About?

A. About 160 feet, I should judge, square.

Q. How does it lay in regard to the air and sun?

A. It is all open.

Q. Now, during the last year that you were there what was your custom in regard to drawing from the river?

A. Just about the same, only a little more.

Q. What was your custom in regard to fires in drawing from the river during that year?

A. That year I had to pump wholly and entirely the water from this river or from this reservoir; perhaps we might pump a little while from the reservoir; we had that the second year; the first year we did not have the reservoir.

Q. What do you say as to receiving orders at any time during the last year that you were there to draw from the river?

A. Well, I don't remember as I received any particular orders. We were drawing from the river; I was allowed to do it without being reproved, just as I had done it under this superintendent that is now here, Mr. Cogsgrove, when he came here and took charge of the works.

Q. Mr. Cogsgrove, the present superintendent, knew of your drawing from the river during your second year of service?

A. Yes, sir.

391 Q. Do you remember the occasion of the test in the month of January, 1885?

A. Yes, sir; if that was the year that it was in I don't remember.

Q. Now, do you remember what time of day it was that you commenced?

A. I do not.

Q. Have you any recollection as to anything occurring after you had opened up and given that test to the pumps?

A. Yes, sir.

Q. What was it?

A. The gasket between the two thimbles gave out—pulled out of the pump—and that left the suction and the discharge all opened together.

Q. What would be the effect upon the pressure and upon throwing the water uptown here?

A. It would decrease it.

Q. Was that repaired during that day?

A. No, sir.

Q. What have you to say as to continuing your test in the condition in which the pumps were at that time?

A. We continued the test until night.

Q. Did you make any examination that night, or whether any examination was made of the pumps that night?

A. No, sir.

Q. Was there an examination made that night?

A. I believe not; not until the next morning.

Q. The next morning was there an examination made?

A. Yes, sir.

Q. What did you discover upon making the examination the next morning?

A. I found the packing pulled up between those two thimbles, and that the pump was full of sticks and chips.

Q. What was the effect as manifested by the gauge?

A. The gauge dropped down, when they opened their
392 hydrants, to sixty pounds, and then I worked the pumps harder and I gained a pressure of about 78 pounds, I believe, if I remember right, and then they stood quietly for a few minutes and then gradually kept going higher until my pumps disconnected, and I think it got to 85 pounds water pressure when the pumps disconnected, and I shut the pumps down to connect them again. I connected the pumps together, and I could not do as well on the pressure after that and found there was more deficiency, but I had no time to look at anything. We kept at work until night, and in the afternoon some time Mr. Brouwer, who was one of the councilmen at that time, came in and we had 120 pounds pressure at that time, and he told me when he came in that they had four one-inch screens at that time.

Q. Now, what have you to say as to making connections with the river at the time of that test?

A. We connected with the river, I think, in twenty minutes.

Q. From the time the test began?

A. After the test began. I think we pumped off the driven wells — twenty minutes, and then opened up on the river.

Q. What have you to say as to continuing that connection with the river during the remainder of the test?

A. We continued the river connection for the balance of that day.

Q. Now, how long have you been familiar with that portion of the city where these works are located, where the suction was taken from the river and the drive-wells that are connected with the works?

A. I went there eight years ago the 8th day of last May; in 1880, the 8th day of May, I went to that place.

Q. Are you abel to state the condition of the land as to its
393 being moist and water pools standing upon its surface in that vicinity during that time, eight years ago?

A. At the foot of the hill, where their suction is—all along on the foot—there has always been water pools standing around there until the summer, when they commenced to pump from there.

Q. What occurred then?

A. That summer dried them all up, and they had not been there since. Up to the time that I quit the works there had been no water standing on the top of the ground at any time during the season.

Q. Do you know that there has been since you quit?

A. No, sir; I don't.

Q. You have been away from the city principally since that time?

A. Yes, sir.

Q. Do you know anything about the drive-wells in that locality being effected?

A. Yes, sir.

Q. What do you know about that?

A. There was one in particular that I know of. I drove the well

myself and drawed the water from it two years or thereabouts, and that failed, I think, in about eight or nine months. After they commenced pumping there this well failed of water.

Q. As to the location of this water, where the connection is made with the river, what is the nature of the river there?

A. Well, these gentlemen that are acquainted with Grand river—about the most I can say is it is the dirtiest place I have seen along Grand river.

Q. What do you say as to their being a marsh there?

A. Yes, sir; a marsh and two very large privies.

By Mr. NORRIS:

Q. Above the suction?

A. Just above the suction; yes, sir.

394 Q. Mill privies, are they?

A. Mill privies; yes, sir.

Q. And the mills are whose?

A. The one that is burned down now was the Brouwer & Voss mill, and the other one belongs to the Grand Haven Lumber Company.

Q. Did they use a large force of men at that time?

A. Yes, sir.

Q. They used those privies?

A. Yes, sir.

Q. How many drive-wells did the company start in with?

A. 65, I believe, if I remember right.

Q. How many did they have when you finally quit?

A. 85.

Q. Did the additional twenty increase the flow of water materially?

A. No, sir.

Q. You still had to go to the river?

A. Yes, sir.

Cross-examination by Mr. HOWELL:

Q. You say the additional drive-wells did not increase the flow of water that they could draw from the wells?

A. No, sir.

Q. What seemed to be the trouble? Can you account for that?

A. Yes, sir. I am not very much of an educated man, and I would have to tell you in my own way. If I should drive a well here twelve feet deep and another one there twelve feet, and then I put my pump this side of this well I will pull the water out of this well first. When I had got the water out of this well, so that I get air from here, I could not pump out of the other one, and that

395 was the case with these wells. It didn't help it any.

Q. That is the way you suppose it was?

A. Well, there is a possibility of mankind being mistaken in their judgment.

By Mr. NORRIS:

Q. Were these drive-wells connected in any way by piping?

A. Yes, sir; they were all connected together. Those wells were all connected to the same main pipe and were intended to syphon the water—were intended to syphon it over into a dug well.

Q. And then to be taken from that?

A. And then to be taken from that, and there was a time when the water got a little low and it would not syphon; at first it did.

By Mr. HOWELL:

Q. You say at first the water syphoned from the drive-wells into the dug well?

A. Yes, sir.

Q. Without the aid of any suction?

A. Yes, sir.

Q. How did it syphon from all the different lines of drive-wells into the dug wells?

A. Well, there was only one main line from the wells and all was attached to these different points.

Q. How many points do you say had been put down when you left?

A. When I left there was eighty-five, if I am not mistaken in my memory, and I believe I am not.

Q. You speke of the river where the suction from the pump-house connects with the river; were the privies that you spoke of upon the same side of the river that the pump-house is?

A. Yes, sir.

Q. Were the mills upon the same side?

A. Yes, sir.

396 Q. Both above?

A. Yes, sir.

Q. Was there any line of pipe carried across the river there?

A. No, sir.

Q. Has there been at any time?

A. Not that I have ever known of.

Q. Was there a mill across the river, opposite where the suction entered the water?

A. Yes, sir.

Q. What mill was that?

A. That was a mill that belongs to Mr. Cutler.

Q. Is it there in operation now?

A. Yes, sir; it is what is called the old Haire mill.

Q. The other two mills you first spoke of are on a different side of the channel?

A. On the same side that the pump-house is on.

Q. Speaking of the river, does the suction enter the main channel of the river?

A. No, sir.

Q. The two mills you first spoke of, are they on the same side of the channel that the suction enters and that the pump-house is?

A. Yes, sir.

Q. How far from where the suction enters the river—how far was the nearest of the two mills to the point where the suction enters the river?

A. I should judge about one hundred or perhaps one hundred and fifty feet, one of them, the nearest one.

Q. Do you know how far below the surface of the water the end of the suction was placed?

A. I have an idea that it was somewheres about six feet, but I could not be positive about that.

Q. How near to the channel of the river do any of these drive-wells approach?

397 A. It is a long ways from the channel of the river, the main channel.

Q. How far from the channel where the suction enters? What distance is it between the drive-wells and that channel?

A. Well, I don't know; I might call it about thirty rods, perhaps, but I am not used to the measurements of rods that way; I might get a little off, but according to my judgment, as near as I know what rods are, I should judge about thirty rods.

Q. How far is it from the pump-house to the channel where the suction enters?

A. It may be ten rods further, perhaps, making it forty rods.

Q. Do you think it is not more than that?

A. I don't think it is.

Q. The ground descends from the pump-house all the way to the channel, does it not?

A. Yes, sir; it has been filled in with sawdust, edgings, and refuse from the mills quite a piece back.

Q. But not back to where the drive-wells enter the ground?

A. Very near it; yes, sir; in some places not more than two or three rods from the drive-wells that it has been filled in.

Q. You say you have not noticed any pools of water standing there since the water works commenced working?

A. No, sir.

Q. But you were living here then. How far did you live from the pump-house?

A. I lived right in the pump-house?

Q. Had you a family with you?

A. Yes, sir.

Q. Did you use the water?

A. Yes, sir.

Q. For drinking, culinary, and all purposes that — used water for?

A. From the drive-wells I did; I had a *had a* pail that I

398 drawed it out of this dug well with, and I didn't really like that; that was pumped in from pressure; I had my house furnished with that water, but I did not use it all the time.

Q. But you did use water from the drive-wells for that purpose?

A. Yes, sir.

Q. Drinking and cooking and everything?

A. Yes, sir.

Q. Did you have any fault to find with that water?

A. No, sir; that was good water.

Q. In making the test in January, 1885, which you spoke of, how soon after you begun pumping water for the test did you discover that there was anything wrong with the pump?

A. Oh, it was about half an hour, I should judge, after I commenced to pump with them.

Q. How long had the pump-house been in operation at that time and the engine been supplying water?

A. It was about two months and a half, I think.

Q. You were engineer all the time?

A. Yes, sir.

Q. Please describe again, if you will, the difficulty that you observed about the pump at that time, or first you may state what water pressure you had ordinarily been using during the two months in supplying water.

A. Well, usually we calculated to carry at that time about forty or fifty pounds pressure on an average for every-day use.

Q. Had that proven sufficient for the water supply you were giving?

A. Yes, sir.

Q. And for the pressure you commenced using how much or attempting to use how much for the test, I should say?

399 A. For the test I calculated to use all I could get, and I got about eighty-five, if I remember right, and the pumps, which is a double pump connected together with a couple of bolts, they uncoupled and I shut down and coupled up.

Q. That is, they uncoupled themselves?

A. Yes, sir; they came apart in working and I shut down and coupled them together again, and then I found I could not get the same pressure; the pumps didn't seem to work as powerful as they did on the start.

Q. What pressure did you get before you discovered the trouble with the pumps?

A. I had about eighty-five pounds pressure.

Q. Before you discovered any difficulty?

A. Yes, sir.

Q. Then the uncoupling took place?

A. Yes, sir.

Q. After that you couldn't get so much?

A. I couldn't get so much after that; they didn't seem to work right.

Q. Had you any idea at that time what was the matter?

A. I had no idea at the time what the trouble was.

Q. After that how much pressure did you get?

A. After that I had 120 pounds pressure.

Q. How did you get as much as that?

A. Because we did not use as much up at this end, you see—my one pump.

Q. One pump seemed to work perfectly?

A. One pump was all right; yes, sir.
Q. Did they work independent of each other?
A. They would; yes.

By Mr. NORRIS:

Q. At the time you got this 120 pounds pressure was that
400 the time they reported to you they were carrying uptown four one-inch streams?
A. Yes, sir; they were both running; the one being disabled, the other one done the most of it.

By Mr. HOWELL:

Q. There was really but one pump that gave 120 pounds pressure with four streams?
A. No, sir; not so; the other pump helped some. The pump, although disabled, it would do a little.
Q. Did you ever make any test to see what pressure, water pressure, you could get when both pumps were in order?
A. No, sir; we had carried 160 pounds pressure to try and test the pipes with.
Q. 160 pounds water pressure?
A. Yes, sir; but we wasn't pumping—that is, we hadn't no discharge.
Q. Then you could attain 160 pounds water pressure with the pumps in order?
A. Yes, sir; we could attain 300 if we had no discharge.
Q. How high a pressure did you have when you were discharging water?
A. 110, I think, was the highest I ever carried when during a fire here.
Q. Was that all the pressure that you needed at the time?
A. Yes, sir; at least it was reported to be that that was enough.
Q. Could you have carried more if it had been necessary at that time?
A. I think I could; I could carry almost any amount of pressure that I wanted, using two or three streams of water; the amount of pressure we attain don't signify anything. If they wasn't using very much with the pumps we could attain any pressure that we were amind to if there was not enough being drawn from them but what they could supply it all right.
401 Q. The reservoir you spoke of as being constructed near the pump-house was about how much in area?
A. I think it was about 160, 170, or 180 feet square, 12 feet deep, with slanting banks, lined inside with clay and gravel.
Q. I think you were asked if it was kept covered. Should such a reservoir be kept covered?
A. Well, I don't know, I am sure, whether it should be or not. I never had any experience in that line. I don't know whether it would be better if it was kept covered or not.

Q. You don't know whether it is usual for water companies to keep such large reservoirs covered or not?

A. No, sir; I do not.

Q. What time in the year did you leave the superintendency of the works?

A. I don't understand that.

Q. What time of the year did you quit the works?

A. The first of September.

By Mr. NORRIS:

Q. 1886?

A. Yes, sir.

By Mr. HOWELL:

Q. You were the superintendent at that time?

A. I was the engineer.

Q. Who was the superintendent when you left?

—. Mr. Cogsgrove.

Q. How long had he been there?

A. He had been there just about a year as superintendent.

Redirect examination by Mr. SEELEY:

Q. You spoke about there being a mill across the river
402 from where these water works are, called the Haire mill, owned by the Cutler and Savidge Lumber Company. How far is that mill from where the water works are?

A. A half a mile, I should judge.

Q. To get to that mill what would you have to cross in going from the water work*d*?

A. If you went straight across you would have to cross a marsh.

Q. How many channels were there?

A. About three channels, I think—small channels and the main channel.

By Mr. NORRIS:

Q. Was it reported by any of the officers of the company during its test in January, 1885, that there had been a pipe burst?

A. Yes, sir; the superintendent reported to me that there was a leakage in one of the pipes.

Dr. W. S. WALKLEY, being sworn, testified as follows:

Direct examination by Mr. SEELEY:

Q. What is your business?

A. Practice of medicine.

Q. Whereabouts?

A. Grand Haven.

Q. For how long have you practiced medicine here?

A. About six years.

Q. How long have you practiced medicine since you first commenced practicing?

A. 13 years.

Q. Are you acquainted with the Grand Haven water works?

A. Yes, sir.

Q. Have you at any time been a user of that water, a consumer?

A. I have used it nearly three years, I think.

403 Q. Last past?

A. Yes, sir.

Q. What have you to say as to the quality of the water at the time you commenced using it and from that time down for two years?

A. I began using it, I think, in June.

Q. What year?

A. Well, that would be June, 1885, I think. I have been in that house two and a half years. I guess it was June, 1886; I began using it in June, and when I began the water was very bad. I attributed it to the pipes not being flushed and I found that it didn't improve, and one morning—I am in the habit, when I can get good drinking water, the first thing in the morning to take a glass of cold water. The water tasted unusually bad. I took it into a glass and held it up and it looked almost like weak tea. I didn't know what to make of it. I enquired, and they said there was a fire the night before. Then all that summer we didn't attempt to use it for drinking purposes without boiling.

Q. Why?

A. Well, because I didn't regard it as safe, in the first place. It stunk. You could smell it when you held the glass under the faucit and forced the water into the glass; would give off an odor that anybody that cared or knew anything about hygiene would be afraid to drink the water. We boiled the water regularly for drinking purposes.

Q. How long did that condition continue?

A. Well, it was bad all that summer, but it was worse, of course, after a fire. It was so bad in November that a horse that I got from the country went two days before she would drink the water. There would be a deposit. After a fire there would be a deposit in the glass or pail, a muddy, slimy deposit, and one morning I

404 found a fish in it. It was not big enough to eat.

Q. How long did that condition of the water continue?

A. Well, it was bad all summer until, perhaps, December. Then I didn't regard it as good water, for some of my family were sick nearly all the time. In fact, I think I have used more medicine in my own family since I have lived in that house than I have before in ten years. Another family moved in and they were sick. It was not as bad in the cold weather, except in case of fire, as it was in the warm weather.

Q. What have you to say as to that being the condition for the two years that you have used it?

A. It has been poor all the while.

Q. It is to-day?

A. Yes, sir; it is worse at times now than it is at other times. It

is poor water now. You will smell it. You can smell it now in the morning. Turn it into a glass and when you take the glass to your mouth you can smell it almost every morning.

Q. What is your opinion as to that water—the effect upon the health of the people using it?

A. It certainly could not help but be detrimental.

Q. It is deletarious to health?

A. Yes, sir.

Cross-examination by Mr. HOWELL:

Q. Where is the house you reside in?

A. Between Sixth and Seventh streets on Washington.

Q. At the time you commenced using the water?

A. Yes, sir; that is all that I have used it, is at that one house.

Q. You left that place how long ago?

A. I am living there now.

405 Q. I thought you talked of a family that was occupying a house after you left?

A. No, sir; a family came in and occupied the house—that is, while we were there—and they have gone.

Q. Are you using the water yet?

A. Yes, sir.

Q. And you have been ever since you commenced the use of it?

A. Yes, sir.

Q. Three years ago?

A. I guess it was two years and a half ago. I guess it was two years last June.

Q. You have used it for cooking purposes?

A. Yes, sir.

Q. And drinking purposes?

A. Yes, sir; by boiling during the summer. We usually boil it for drinking purposes.

Q. You used it for all purposes about the house?

A. Yes, sir; we used it for all purposes about the house.

Q. Have your family been in better health latterly than formerly?

A. They have been in better health than they were, although we all have been sick more or less in the last year. After we had used it about six months I think every member of the family had malarial fever. I had it off and on for five or six weeks. I was laid up with it six weeks; the first, I think, I have had since I was in Georgia, during the war.

Q. Did you ever submit the water to any test to know the component parts of it?

A. No, sir.

Q. Is there any well upon the premises you occupied?

A. No, sir.

Q. Was the odor you discovered about the water caused by any unhealthy properties in it?

A. I think so; pure water ought not to give off any odor at all.

406 Q. Did the boiling remove all of that?

A. No, sir; it won't remove all of that, and yet it renders it less injurious. There are certain properties that boiling will remove.

Q. So far as it was unhealthy you discovered that during the first summer you used the water?

A. Yes, sir; it was worse the first summer than it has been this.

Q. You made no new discoveries about any injurious qualities since that time?

A. No, sir; the health of my family has been better the last year than it was the year before. The water has averaged better this year.

Q. The second year did it average better than the first?

A. Well, no; I think up to the cold weather setting in last fall it was about the same or a little worse, perhaps. Perhaps a year ago this autumn was the worst than it was any time.

Q. It has been very dry then?

A. Yes, sir; very dry and a good many fires, and the lawns had been using a good deal. They had been using a good deal on the lawns.

Q. Much more water had been used on account of the great drouth than ordinarily?

A. Yes, sir.

Q. In the winter, in the cold weather, did you observe any of that odor you spoke of?

A. I would not notice it so much in freezing weather, but in the summer time, after a fire, it was frightful to think of even cooking or drinking such stuff.

407 WILLIAM CASS, sworn on behalf of the defendants by the notary.

Direct examination by Mr. SEELEY:

Q. Where do you reside?

A. Grand Haven.

Q. How long have you resided here?

A. I have been here ever since 1863.

Q. What is your occupation?

A. Photographer.

Q. Have you at any time been a taker of the Grand Haven water works?

A. I have been using it for about four years; I used it one year when we lived over Tillman's meat market; we used it about three years in Griffin's.

Q. What have you to say as to the quality of the water during the first year you used it?

A. Well, there has been a great many times that it has not been really fit to use and at other times it would be quite passable.

Q. What have you to say as to its being good at any time during the time you have used it?

A. Well, I think that the first year, when they first started it, I think the water was better than it has been any time since.

Q. What have you to say as to its being good water at any time since the first year when they put the works in?

A. Well, I don't think it has been; the fact of the business is, a great many times the water smelled so bad instead of drinking it, when we could not do any other way, I would go out to Hubbard's well to get water to drink; I could not stomach it. Even when it was running into the pail it would smell fearfully, and, of course, we had to use it that is all the water we had—that is, for washing,
408 &c. We had to get along with it, but as to drinkiug purposes we didn't use it much of any for the last three years. In the winter time it would be cold weather and the water would be passable; at other times, through the hot weather, the spring and fall, the water has not been good; I would not drink it; it has hardly been fit for cooking.

Q. State whether at any time you have noticed any dregs and sediment in it.

A. Well, I have noticed it several times; it appeared to be after a fire, though; it would be almost muddy, settling in the pail, slimy. It would settle on the edge of the pail so that the pail would have to be washed out after the water stood in it over night. In the morning you would have to wash it out—slime and kind of a mud, and, of course, after that we never undertook to let any of it stand in the pail over night.

Cross-examination by Mr. HOWELL:

Q. What part of the city do you live in?

A. Down on Main street.

Q. How far from the river?

A. Oh, just one block from the river.

Q. You have lived in the same house during all of the time you have been taking water?

A. The last three years; I have been living three years there up to the first of September.

Q. You have used the water for cooking and culinary purposes during the last three years?

A. Oh, yes, sir; we had to use it for cooking; the water after it was boiled it was generally purified; something of the taste
409 that would be in it from the slough water or anything of that kind.

Q. You have used it for cooking purposes?

A. Yes, sir; we have used it for cooking purposes and for drinking purposes. I don't think the water is in the summer especially. I don't think the water has been fit to drink, to tell the honest truth about it, and that is the reason why I have gone to Hubbard's pump and got drinking water.

Q. How far is that from your house?

A. Oh, it is probably a half block up this way.

Q. That is good water, isn't it?

A. That is good water.

Q. Pure?

A. Pure water and splendid drinking water, as good as there is in the city.

Q. Is it an open well, a drive-well?

A. A drive-well.

Q. Do you know how deep Hubbard's drive-well is?

A. I could not say how deep it was. I kind of think that it is about nearly twenty-one or twenty-two feet; somewhere along there. I could not say exactly.

Q. And furnishes an abundance of water, does it?

A. Yes, sir; most of the street folks drink from it; there is a great deal of water used out of it; they get it there a good deal for public benefit.

Q. Immediately after a fire, you say, the water is much worse and roiley than at other times?

A. Yes, sir; as for the roileyness of it, there have been times that I have got up in the morning and drew a pail of water and as it struck the pail it would fairly smell—well, you couldn't stand it.

Q. How long would this effect caused by drawing water for a fire last?

A. Well, I don't know; probably half a day or so before it would get cleared out; maybe longer. I never watched it to see how
410 long a time it would be.

Q. That is about how you recollect it, about half a day?

A. Yes, sir; just about.

Q. Have fires been frequent when it was effected that way?

A. I don't think they have been very frequent.

Q. Has it been effected that way by fires during the past summer?

A. Yes, sir; I think it has been.

Q. I mean this year?

A. I think there was twice that I have noticed it right away after a fire; well, muddiness.

Q. This summer?

A. Yes, sir; and this stench and smell that comes from the water has been when there was no fire. It looked to me—that is, from the looks of the water, being high colored—it looked to me as if it was slough water instead of real water out of the ground.

Q. These two fires, this summer you speak of, about what time did they occur?

A. They occurred in the night.

Q. About what time in the summer?

A. I think it was some time probably in June.

Q. Both of them?

A. No, sir; I think the other one was in the month of May some time; there was a fire, I think, in May some time, if I recollect right. One was in June and the other was in May, I think.

Q. Then, with these two exceptions, the water has not been so roiley this year?

A. No, sir; it has not been so roiley or as muddy as it was, but

the smell of the water has been—a great many times this smell has been fearful.

Q. How is it in the winter?

A. I told Mr. Griffin, the man that I rent the house of——

411 Q. (Interrupting.) How is it in the winter about that particular odor of the water?

A. Well, in the winter the water is better in cold weather than it is in the summer.

Q. Do you drink it in the winter?

A. Well, we have to use it for tea and coffee purposes; no; I don't drink much of it in the winter.

Q. Do your family?

A. Unless it is pretty clear.

Q. Do your family in the winter?

A. No; I don't think she does. I haven't got only my wife, and she don't drink a great deal of water, anyway. She has got against the water, and she has declared up and down she would not drink it. She would hardly use it for tea purposes.

Q. It is on account of this odor that you dislike it so for drinking?

A. Certainly.

HENRY BLOCKER, called as a witness on behalf of the defendants, being sworn by the notary, testified as follows:

Direct examination by Mr. SEELEY:

Q. Where do you reside?

A. Grand Haven city.

Q. How long have you resided here?

A. About 21 years.

Q. What is your occupation?

A. Machinist.

Q. What office did you hold in this city during the years 1884 and 1885?

A. I was alderman.

Q. Do you remember the occasion of the test of the Grand Haven water works?

A. I do remember something about it, I think.

Q. Did you take part or were you present at any portion of the test?

A. I was present at the pump-house.

412 Q. What discovery did you make down there during the test, if any?

A. Well, do you want me to state the whole thing—what I know about it?

Q. Yes, sir.

A. I was requested by Alderman Emlaw—I don't know whether in an official capacity or not—requested by him to go and make observation in the pump-house in company with Mr. Moody, and I went down there and looked over the pumps and boilers. They started up. They had the suction connected on the drive-wells, and

the engineer told me the pumps were coupled together. They got them running, and the pump was not running very good at the time. They didn't get water enough. After running about, I think, five or six minutes—I am not sure about the time exact to the minute—the well was pumped dry. The two pumps that connected with the fly-wheel, they come apart, and they started them up again and started on the river at the time. They might have pumped from the well a little more after that. In a short time they pumped from the river, and the pumps came apart again, the second time, and I made the suggestion to the engineer to run them independent of each other—they would probably make a better test—and I guess he did at the time; I don't remember whether he did or not; I am not certain. I don't remember the exact pressure carried. Mr. Moody kept the pressure and I kept the revolutions several times of the pumps. The pumps didn't get water enough from the river; they were pounding.

Q. What, in your judgment, was the cause of the pounding?

A. Well, there was several causes. In the first place, they didn't get water enough. They might not get water enough through the pipe; there might be a leak in the suction pipe, and it might be too small; but the pump set too high and raised the water too high.

413 Q. Do you know how high those pumps are raised?

A. I have not measured them, but I have heard it said that it was 22 feet above water. I don't know how true that is. That is what I was told.

Mr. HOWELL: I object to what he heard stated.

Q. Do you mean the lift is 22 feet?

A. That is what I was told; that the pumps were 22 feet, but I am not certain; that is the only time I have been to the pump-house since it was built.

Q. You say you were an alderman at that time?

A. Yes, sir.

Q. And you went down there at the request of Mr. Emlaw?

A. Yes, sir.

Q. Were you up here where the water was being drawn at any time?

A. No, sir.

Q. You didn't see the water drawn?

A. No, sir.

Q. While you were down there how long did you remain there at the pump-house?

A. Well, I couldn't say; it may have been an hour or three-quarters of an hour. I am not certain about that.

Q. Did they have to shut down at any time during the test?

A. They did shut down twice.

Q. Have you been a water-taker from these water works?

A. Yes, sir; we have got water from the water works.

Q. For how long have you been a water-taker?

A. Since the first day of December, 1885.

Q. Whereabouts did you take it?
A. I took it at the end of Fulton street, at the machine shop.
Q. What have you to say as to the quality of the water?
A. Well, it would do very well for wetting down; that is we used it for; wetting the sand and for water in the boiler in the
414 summer time. In the winter time the men in the shop drank the water, but not in the summer time.
Q. Why?
A. You can't drink it.
Q. Why?
A. It smells; it would make a man sick to drink it.
Q. How long has that condition existed?
A. The first we noticed was when it got warm in the spring of 1886.
Q. From that time down to what time?
A. To the present time. None of the men in the shop drank it during the summer time, but they are all drinking it yet.

Cross-examination by Mr. HOWELL:

Q. You never used the water for drinking yourself?
A. I have drunk it in the winter.
Q. You still drink it in the winter?
A. I presume so. When it gets cold water and freezing we shall drink it again.
Q. You have drunk it right along in the winter?
A. Yes, sir.
Q. Have you used it for cooking purposes in the winter?
A. No, sir; we don't use it for cooking. We don't cook in a machine shop.
Q. Have you taken it at your house for family use?
A. No.
Q. You have never taken it at all there?
A. No, sir.
Q. Then all the use you have made of it is for use in your machine shop?
A. Yes, sir; that is all.

415 JOSEPH PALMER, being called on behalf of the defendants, being duly sworn by the notary, testified as follows:

Direct examination by Mr. SEELEY:

Q. Where do you reside?
A. Grand Haven.
Q. What is your age?
A. 53.
Q. What is your occupation?
A. Well, I am chief of the fire department of the city and am superintendent of the water works.
Q. Are you acquainted with the Grand Haven water works?
A. Yes, sir.

Q. You are superintendent of the city water works?
A. Superintendent of the city water works; yes, sir.
Q. Do you remember the occasion of the test of the Grand Haven water works in the winter of 1885?
A. I do.
Q. Were you called upon by any one to assist during that test?
A. To assist in the test?
Q. Yes, sir.
A. Not officially; no, sir.
Q. Did you do anything to help in the test at all?
A. Yes, sir; I helped to hold piping.
Q. Who for?
A. For the Wiley Water Works Company.
Q. Who was it came to you?
A. The superintendent, Mr. Van Patten.
Q. Whereabouts was it that this test took place?
A. Up here on the court-house square, one line up by the big school building and one south by Mr. Armstead's, and the resy was around the court-house square here.
Q. What time of day did that test commence?
A. Just after one o'clock.
416 Q. What was the greatest number of streams thrown at one time?
A. Six.
Q. For how long a time were six streams thrown at the same time?
A. Only a few minutes, I believe; I don't know; it may have been 20 minutes, and it may have been a half hour, and it may be a little less. I don't remember now just exactly.
Q. During the time the streams were being thrown did anything occur to the streams?
A. They shut down once or twice, I guess.
Q. How high, in your judgment, did those streams go at any time? What was the highest?
A. I could not say; I was busy. They were not what a fireman would call a good, strong stream. Well, they were measured and I would not want to give my idea of it; I heard what it was.
Q. During that time — whether there was any other streams being thrown at the same time from the city water works.
A. Yes, sir.
Q. What height did the Grand Haven water works throw as compared to the height thrown by the city water works?
A. We calculated ours was as high again.
Q. The city works threw as high again as the Wiley works did?
A. Yes, sir.
Q. Did you observe the quality of the water that was thrown during that test by the Grand Haven water works?
A. I did not.
Q. Did you notice the color of the water at any time?
A. Yes, sir.
Q. What was the color?
A. Roiley.

Q. Was there snow upon the ground at that time?

A. There was, sir.

417 Q. What was the visible effect upon the snow where the water fell?

A. It was yellow.

Q. What have you to say as to that condition continuing during the entire time of that test as to the discoloration of the water?

A. It discolored the snow wherever it struck it.

Q. During the whole test?

A. Yes, sir.

Q. Have you been familiar with the water from that time down to the present time?

A. Well, I couldn't say that I have been familiar with it this year at all.

Q. This present year?

A. No, sir.

Q. Up to this year what can you say?

A. We used it any time we had a fire almost. We have not used it since last winter now.

Q. What have you to say as to receiving orders from the common council not to use it?

A. Yes, sir.

Q. You did?

A. Yes, sir.

Q. What was the quality of the water at the time of a fire and during those years that you did use it when we had a fire?

A. Well, it was roiley and dirty and muddy invariably, every time.

Q. What was the condition of it, if you know, after a fire or at times between—intervening between fires?

A. I don't know; I never had anything to do with it.

Q. Do you remember the occasion of a fire down here at the D. & M. freight house in the winter?

A. Yes, sir.

Q. You heard the testimony of Mr. Schofield and Mr. Cogsgrove with regard to that fire at the time of taking their testimony in June?

A. Yes, sir.

418 Q. What have you to say as to connecting with the Grand Haven works for the purpose of putting out that fire at that time?

A. We connected up with them and put out the fire; yes, sir; we did.

Q. How many lines of hose did you lay so as to connect with their works?

A. Four lines was laid on their works.

Q. What was the water pressure at that time?

A. Pretty fair; good enough for our use.

Q. What was the effect upon the hose as to bursting them?

A. Didn't burst any.

Q. It didn't burst any at all?

A. No, sir; not by water pressure.
Q. Was there any hose bursted at that fire?
A. There was.
Q. What was the occasion of bursting of that hose?
A. One line of hose was torn, and the railroad company or somebody drew freight cars over three lines and cut them off.
Q. There were no hose burst on the occasion of that fire that were connected with the Grand Haven water works by reason of the water pressure?
A. No, sir; not one.
419 Q. How long did you continue to use the water from these works on the occasion of the fire?
A. About eighteen hours before we shut down.
Q. How was the water pressure along the latter part of the fire as compared with the water pressure at first?
A. Not so great.
Q. Why?
A. I told the superintendent there was no use of it. We had all of our hose wet and was very cold and we had to leave those lines there to keep them thawed out, and I told him to run a light pressure. There was no use of crowding it at all; we were all tired out and went away and left it.
Q. You have not connected with the Grand Haven water works during the year 1888?
A. No, sir; I think not.

By Mr. NORRIS:

Q. In throwing the stream at this test did you throw it up alongside of any building?
A. No, sir; we were right in the street.
Q. Right in the open street?
A. Yes, sir; on the four corners.

By Mr. SEELEY:

Q. Haven't you any opinion at all of the height that water was thrown on the occasion of that test?
A. Well, we called it—some called it 50 feet and some called it 60 feet.
Q. You have no opinion whatever as to the height?
A. No, sir; I didn't try to offer any, because I heard Mr. Emlaw talking about it.

Cross-examined by Mr. HOWELL:

Q. Did I understand you to say that you were the super-
420 intendent of the city water works now?
A. Yes, sir.
Q. And chief of the fire department of this city?
A. Yes, sir.
Q. How long have you been chief of the fire department of the city?

A. It will be three years in December—the first of December.

Q. You spoke of water being thrown from the city water works at the same time that the six streams were being thrown from the Grand Haven water works on the occasion of that test?

A. Yes, sir.

Q. Where was the water from the city water works thrown?

A. Right along just across the street, the hydrants were.

Q. How many streams from the city water works?

A. Only the one.

Q. How far was it from the place of the test to the city water-works pump-house?

A. Five blocks.

Q. And how far from the place of test to the Grand Haven pump-house?

A. About a mile—just about.

Q. Five blocks would be about what distance?

A. Well, five blocks would be about a third of a mile, I guess.

Q. The test at the court-house, was that about as high ground as there is in the city?

A. Yes, sir; it will average, I guess, the principal part of the city.

Q. Were you chief engineer of the fire department at the time of this test?

A. No, sir.

Q. How soon after were you appointed?

A. I was appointed December, 1886—December, 1885, I think it was.

Q. And always at fires from that time until this present year you connected your hose with the Grand Haven water works?

421 A. Most of the time; sometimes with the old water works, sometimes with the Wiley.

Q. You did that while in charge and command of the fire department as chief engineer, did you?

A. I did, sir.

Q. You spoke of the council telling you not to do it. Why didn't you obey the council?

A. We did after we got it through our heads that we had to obey orders.

Q. It took you about two years to discover that, did it?

A. Yes, sir.

Q. Wasn't that rather a long time to take you to discover that?

A. We were not studying that much; we were looking for water when the bell rung.

Q. On the occasion of these fires when you used from the Grand Haven water works did you send notice to the Grand Haven pump-pump-house?

A. No, sir.

Q. You did not notify them?

A. No, sir; we always found them ready.

Q. You never gave any notice that you wanted any fire pressure?

A. No, sir.

Q. The common council knew that you were using water in violation of the orders?

A. I could not say; I never reported to them. If we got the fire out that is all we cared about it.

Q. Did you ever see councilmen at the fires?

A. Yes, sir.

Q. When you were using water contrary to their orders?

A. Yes, sir.

Q. Have you seen the mayor there?

A. Yes, sir; I saw the mayor there—Mayor Schofield.

Q. And all the councilmen at one time or another?

422 A. I presume so. I could not say for certain now, but I know they did not hide that I know of.

Q. Did they reprove you while you were using the water?

A. No, sir.

Q. They did not call your attention to your disobedience?

A. No, sir.

Q. Did you think at the time you were using the water from the Grand Haven water works that you were doing real violence to the feelings of the common council?

A. We did not have time to think; I never thought of it that way.

Q. Did the bursting of the hose at the time of the fire at the depot that you speak of affect your water supply injuriously?

A. Oh, no; I shut it right down, all but one line. There was a stone got in one hydrant and we ran along, and after we got done with it we did not shut it down. The stone being in it, we could not shut it down until we shut the line off. That was not shut down until after the fire was out.

Q. About how far was the depot from the Grand Haven Water Works Company's pump-house?

A. It must be a good strong mile and a half.

Q. These orders you received from the common council not to use the Grand Haven water works water, were they verbal orders?

A. Yes, sir.

Q. Where from?

A. I don't know who from really now; some of the aldermen, I guess.

Q. Where were they communicated to you, by some alder-

423 men in the street?

A. Well, I could not say; I guess the first intimation I had of it was right in the council room after passing that resolution.

Q. Do you recollect whether that was so or not?

A. I think they did.

Redirect examination by Mr. SEELEY:

Q. On the occasion of the passage of the second resolution forbidding the department from using the water of the Grand Haven water works, do you remember if you were in the council at that time?

Mr. HOWELL: I object to that; he has not spoken of a second one.

Q. Do you remember of a second resolution being passed by the council forbidding the department using the water of the Grand Haven water works?

A. Well, I don't know whether it was the second one or not; I know of one.

Q. Were you chief at the time of the resolution that you have in view?

A. No, sir.

Q. Now, what have you to say as to your attention having been called to the fact of the passage of the resolution about two years ago by the common council forbidding the use of their works by the department?

A. Well, I was notified of that.

Q. From that time down I will ask you if the aldermen—nearly all of them—did not complain about the department using these works on the occasion of fires?

A. Yes, sir; they always have, more or less.

Q. They at least have for a year and a half past?

A. Yes, sir.

424 Recross-examination by Mr. HOWELL:

Q. No resolutions have been passed since you became chief of the fire department that you know of?

A. No, sir.

Q. No copy of any such resolution has ever been served upon you in writing or printed?

A. It has been printed; there has no copy in writing been served on me.

Q, Was there any copy ever served on you?

A. No, sir.

Q. In these complaints that the aldermen made to you, was it by the aldermen singly as you met them and talked with them?

A. Yes, sir.

Redirect examination by Mr. NORRIS:

Q. Were you connected with the fire department in the month of April, 1885?

A. Yes, sir.

Q. As chief?

A. No, sir.

Q. You were not chief then?

A. No, sir.

Q. But you were connected with the fire department?

A. Yes, sir.

Q. In what capacity?

A. I think I was assistant chief.

Q. In April, 1885?

A. Yes, sir.

Q. The early part or the middle?

A. For two years.

Q. The resolution seems to have been passed April 16th, 1885; was that the resolution that you heard of when you were in the council chamber?

A. Yes, sir; Mr. Holmes was chief at that time?

425 CHARLES E. WYMAN, being called as a witness on behalf of the defendants and being sworn by the notary, testified as follows:

Direct examination by Mr. SEELEY:

Q. Where do you reside?

A. On Franklin street, in the city of Grand Haven.

Q. How long have you resided here?

A. A little over twenty years.

Q. Are you a patron of the Grand Haven water works?

A. I was until the last month or so.

Q. How early did you become a patron of their works?

A. Well, I could not tell you that, exactly; immediately after the pipe- were laid along on the street.

Q. For what reason did you cease to be a patron of their works?

A. Well, I didn't think the water was very good for use.

Q. What have you to say as to the nature of the water during the time that you have used it from the Grand Haven water works?

A. Well, part of the time the water was very bad—that is, for use; you could not use it except for lawns and washing buggies and the like of that; but I used my drive-well. I had a well and I used that for the water that was used about the house.

Q. On the occasion of fires during the time you were using this water, did you notice anything peculiar about the water?

A. Oh, yes, sir; it was red and muddy—very bad.

Q. And for how long did that condition exist or continue after the fire?

A. Well, not more than perhaps 24 hours; not to be very bad. You would open the hydrant and let the water run and it
426 would run out of the pipe, and then it would be pretty fair water.

Q. Whether at any time when you were using this water you discovered any reptile, fish, or bugs, or anything of that kind in the water.

A. I found, I don't know whether it was a fish, I don't know exactly what to name it, but it was something about three-quarters of an inch long and I examined it very close. I don't know what it was. I kept it probably a week in a tumbler to find out, if I could, what it was; but I never satisfied myself.

Q. It was alive?

A. Yes, sir; an animal that lives in marshes, or rather dead water, where there is a good deal of vegetable matter in it. I think I have seen the same thing in those places; that is the first thing that I discovered. Since then I never have used the water for

drinking purposes or used it in the house. I went immediately and drove my well and I have always used my water since.

Cross-examined by Mr. HOWELL:

Q. That was the cause of your discontinuing the water for drinking?

A. That was the first thing. I dared not use it any more.

Q. That was the cause of your discontinuing the water for drinking?

A. Yes, sir; we found a little while ago—that was at the time, the same day we made the change—we found quite a large worm; in fact, I didn't see it, but Mr. Griffin was telling me about it. I was speaking in that line and I thought I would speak of that matter.

By Mr. NORRIS:

Q. You spoke of making a change. Are you attached to the city water works?

A. Yes, sir.

427 Q. How is that water?

A. Very nice water.

Q. Is it unusually nice?

A. Well, I think it is the nicest water that I ever saw. I think it is better than the Lake Michigan water; it is a little clearer than the Lake Michigan water. It would be a hard matter to account for that, only that it is filtered through that white sand, and coming through that white sand I think it makes it a good deal lighter color. I don't know how to account for it in any other way.

By Mr. HOWELL:

Q. How long ago was it since you discontinued the use of the Grand Haven water and connected with the city water works?

A. Well, perhaps a month. I don't remember exactly. I could find out by looking at my books; somewhere in the neghborhood of a month.

Q. That was at the time that you changed from the Grand Haven works to the city water works and that you found this live thing in the water?

A. That was the last time I was speaking of; the other was, I think, two years ago the first time.

Q. Up to that time you had used the Grand Haven water all the time for cooking and drinking and all purposes?

A. Yes, sir; we did, but then there is a great deal of the time that we could not use it—that is, at the time we had fires, and then the water wasn't fit for use at all; it was not fit for even a horse to drink at that time, say for 24 hours, and then it would be all clear again.

Q. For how long a time did you use it for drinking and cooking purposes?

A. Oh, I might have used it for two or three years.

428 *Proceedings of September* 19, 1888.

GEORGE D. TURNER, being called as a witness on behalf of the defendant-, being duly sworn by the notary, testified as follows:

Direct examination by Mr. NORRIS:

Q. You are the county clerk of this county?
A. Yes, sir.
Q. And *ex officio* clerk of the board of supervisors?
A. Yes, sir.
Q. Have you with you the supervisors' journal of the proceedings for certain years?
A. Yes, sir.
Q. Will you produce the one for 1883 and turn to page 447? That is the October session of that year, is it?
A. Yes, sir.
Q. Give the equalized valuation of the first and second wards of the city of Grand Haven for that year.

Mr. HOWELL: Note an objection to this as incompetent and immaterial.

A. $1,202,295.
Q. The same for the third and fourth wards,
A. $793,585.
Q. Was that equalized valuation of the first and second wards made by adding twenty-five thousand dollars to the assessed valuation?
A. Yes, sir.
Q. In the third and fourth wards there was nothing added or deducted?
A. No, sir; there was no change; it was equalized as assessed.
Q. Turn to page 38 of Journal 4 for the year next following. What was the equalized valuation of the first and second wards of the city of Grand Haven for that year as given first in the table?
A. The equalized valuation of the first and second wards was $1,177.000.
Q. How much was added to the assessed valuation?
A. $23,325.
Q. Now give the same for the third and fourth wards.

429 Mr. HOWELL: The same objection.

A. As equalized it was $805,305.
Q. Turn to pages 45 and 46. How did the board of supervisors diminish that equalized valuation—to what extent?
A. On page 45, in the consideration of the report of this committee, there was an amendment offered by Mr. Thayer, as follows: That there be deducted——
Q. (Interrupting.) Never mind that. Just give the city of Grand Haven.
A. Grand Haven city, first and second wards, $5,000.

Q. Finally it left the equalized valuation of the first and second wards $1,172,000, taking out that $5,000?

A. Yes, sir.

Q. In the third and fourth wards that year was there anything added or deducted from the assessed valuation?

A. No, sir.

Q. Now turn to page 105. What was the equalized valuation for the first and second wards for that year?

A. $1,000,000.

Q. The third and fourth wards?

A. $720,000.

Q. What did the board of supervisors do as to the assessment?

A. They deducted from the assessed valuation of the first and second wards $59,426.

Q. From the third and fourth wards?

A. From the third and fourth wards, $56,632.

Q. Adding those amounts to the million in the first and second wards and $720,000 in the third and fourth wards gives the valuation of the city?

A. Yes, sir.

Q. This that you are about to read—is that the June session, 1886?

A. Yes, sir.

Q. That being the state- year for equalization?

A. Yes, sir.

Q. What is the equalized valuation of the first and second
430 wards for the year 1886?

A. $878,140.

Q. The third and fourth wards?

A. $635,503.

Q. How much was deducted that year from this assessed valuation in order to make that equalization?

A. From the first and second wards there was deducted $149,485.

Q. Give the amount deducted from the third and fourth wards.

A. $79,692.

Q. Now, page 271, for the year 1887, the first and second wards, the equalized valuation.

A. $980,000.

Q. The third and fourth wards.

A. $705,000.

Q. Was that changed in any way by the board; and, if so, how?

A. From the first and second wards there was $2,250 deducted.

Q. From the assessed valuation?

A. Yes, sir; to the third and fourth wards $11,905 added.

Q. This was at the October session?

A. That was at the October session, 1887.

Q. There are but four wards in the city of Grand Haven?

A. That is all.

Q. Can you find on your book the State and county tax apportioned to the city of Grand Haven in 1883?

A. On page 456, Liber 3, first and second wards, State tax,

$139,258; county tax, $2,205; third and fourth wards, $919.19, State tax; county tax, $1,455.43.

Q. Now the same for 1884.

A. State tax, first and second wards, page 56, Liber 4: State tax, $822.51; county tax, $2,208.05; third and fourth wards, State tax, $565.16; county tax, $1,517.18.

The examination here adjourned until September 28th.

431 JACOB BAAR, being sworn as a witness on behalf of the complainants by the notary, testified as follows:

Direct examination by Mr. HOWELL:

Q. Where do you reside?

A. I reside in the Fourth ward, in the city of Grand Haven.

Q. How long have you resided in this city?

A. All my lifetime; about 29 years.

Q. What is your occupation?

A. Abstracter and real estate.

Q. Are you a householder?

A. Yes, sir.

Q. Have you a family in the house?

A. Yes, sir.

Q. Are you acquainted with the Grand Haven water works, sometimes called the Wiley works, in the city of Grand Haven?

A. Yes, sir.

Q. State whether you are a consumer of the water from those water works.

A. I am a consumer of the Wiley water works.

Q. For what purposes?

A. For household purposes and for the lawn.

Q. Culinary and drinking?

A. Yes, sir.

Q. How long have you been a consumer for those purposes?

A. For about two years and a half at my present residence.

Q. What can you say as to the quality of the water generally; how do you find it?

A. Well, on the whole, I should say the water is to me entirely satisfactory.

Q. Do you say it is good?

A. I consider the water all right.

Q. What do you say as to whether you think it is deletarious to health?

A. I think it is healthful. I shouldn't use it if I didn't consider it such.

432 Mr. MCBRIDE: You have been acquainted with the members of the common council of this city since the Wiley works have been erected here, have you?

A. Yes, sir.

Q. Have you ever had or heard any conversation with any mem-

ber of the council with reference to the object they had in view relative to the Wiley water works?

Mr. SEELEY: That is objected to as being nothing in the issue that would authorize the taking of such testimony. There has been no charge of embezzlement or anything else against the common council of the city of Grand Haven or any member thereof.

The WITNESS: Yes, sir; I have.

Q. You may state with what member, if more than one.

Mr. NORRIS: The same objection.

A. Well, I have had a good many conversations. I have had a conversation with two aldermen of this city.

Q. Name them, please.

Mr. NORRIS: The same objection to all these questions.

A. One was Alderman Joseph Koeltz and another one was Alderman Jacob De Spelder and Charles J. Pfaff, now deceased.

Q. In this conversation you had with them were they members of the common council at the time?

A. Yes, sir.

Q. Can you locate about when that conversation took place, who was present, and where it was?

A. Well, I had the talk with Mr. Koeltz at one time in my office, but it would be hard work for me to state the time; it was some time last year.

Q. While he was a member of the common council?

A. Yes, sir.

433 Q. State the substance of that conversation as you recollect it.

A. Well, I had been in the habit of talking water works some, and we got to talking about the policy of the council and the purpose of our present city council, the then city council, and the matter of the water works was pretty thoroughly discussed and talked over.

Q. What was said, if anything, with reference to the design or object of the council ultimately, the driving out or destroying of the Wiley water works, if anything of that nature?

A. Well, Mr. Koeltz stated that it was their intention to complete the so-called Grand Haven city water works with a view of driving out the Wiley Water Works Company.

Q. Driving them out of the city?

A. Yes, sir; that they would lay pipes along the streets so as to enter into competition with that object in view.

Q. What streets do you mean?

A. Well, Washington street and Franklin street.

Q. Do I understand from the conversation that they were going to lay pipes along the same streets that there was pipes laid by the Wiley people?

A. Yes, sir.

Q. For the purpose of competing with them?

A. Yes, sir; and taking away their consumers.

Q. You say that was last season?

A. Yes, sir.

Q. Can you locate it any more definite?

A. Well, my impression is that it was a short time before election in my office, some time in May, I think.

Q. At that time in what condition was the city water works, so called, or the present plant of the city, whether they had been
434 extended; and, if so, how much and what they were doing?

A. Well, they were in a very incomplete condition and they were talking of extending the water works.

Q. That was before they had made their present extension?

A. Yes, sir: it was before they made the extension.

Q. What and where did you have the talk with Alderman De Spelder in regard to this matter?

A. Well, on several occasions and at different places; several times at my house and a few times at his own house.

Q. When was that with reference to the year?

A. Well, along about the same time last year; early last year.

Q. While he was still a member of the council?

A. Yes, sir.

Q. State what was said in that connection by Mr. De Spelder?

A. He said particularly, on the point of driving out the Wiley Water Works Company, that he understood that it was their intention to do so.

Q. Whose intention do you mean?

A. The common council's intention.

Q. Of the city of Grand Haven?

A. Yes, sir.

Q. Why? What reasons did he assign, if any, for their action?

A. Well, the general opposition to the Wiley Water Works Company; they claimed that the Grand Haven system should be the system for the city.

Q. What did he say, if anything, with reference to laying parallel lines upon the same streets?

A. Well, Mr. De Spelder always talked with me that he was opposed to the plan of extention, but he voted for the extension when the matter came to a vote.

Q. You have now given the general subject of his discussion of this particular conversation that you speak of?

A. It was particularly upon that point. We talked the
435 water-works business over pretty thoroughly.

Q. What had Mr. Pfaff to say in regard to the matter?

A. Well, Mr. Pfaff, in my office, stated on numerous occasions that it was the plan of the men that were pushing the Grand Haven water works——

Q. (Interrupting.) The city water works?

A. The city water works; to clean out the Wiley Water Works Company.

Q. Drive them out of town?

A. Yes, sir.

Q. You speak of the men that were pushing the Grand Haven water works. Who do you mean by that?

A. The aldermen, particularly.

Q. The common council?

A. The common council.

Q. At that time what was the condition of the city water works?

A. Well, the Grand Haven city works were in a very incomplete condition.

Q. Had they at that time extended their mains on the main streets?

A. They did subsequent to that conversation.

Q. I say had they at that time?

A. Yes, sir.

Q. With reference to the time of their extension, when did this conversation take place?

A. It was early last year, I think.

Q. Just before they commenced to extend their works?

A. Yes, sir.

Q. We are particular about these terms. The legal name of the Wiley water works is the Grand Haven water works. That is the legal title of the plant, and when you speak of the Grand Haven water works which do you mean?

A. Well, I mean the city water works. I always say the Grand Haven Wiley Water Works Company and the Grand Haven water works.

Q. That is the way you distinguish them. I am particular about them, because the Wiley works is the Grand Haven water works.

A. Yes, sir.

Mr. NORRIS: The testimony of Mr. Baar drawn out by Mr. McBride, I make the objection to that. The statements of the aldermen outside of their official duty is no evidence against the city.

436

Cross-examination by Mr. SEELEY:

Q. Have you any financial interest to any extent whatever in the Grand Haven water works?

A. In the Wiley Water Works Company?

Q. Yes, sir.

A. Not one cent.

Q. Have you at any time had any since their existence in this city?

A. No, sir.

Q. You have interested yourself very extensively in their behalf, have you not?

A. No, sir.

Q. Have you not worked with aldermen in the interest of the Wiley water works?

A. No, sir; I have worked against the policy of the Grand Haven city.

Q. Have you not worked with aldermen in the interest and in behalf of the Wiley water works?

A. I think not, sir.

Q. Will you swear you have not?

A. No, sir. Yes, sir; I will.

Q. Have you not taken an interest in it at the charter elections in this city in trying to defeat aldermen in the interest of the Wiley water works?

A. I have opposed the election of certain gentlemen because I didn't believe in their policy in the matter of the water works in this city.

Q. As a matter of fact it has been your constant policy in this city to advocate the interest of the Wiley water works?

A. Not particularly.

Q. Not particularly so?

A. No, sir.

437 Q. Don't you know as a matter of fact that your name has been uppermost and commonly mentioned and talked about in this city as being one of the first and foremost men in the city to advocate the interest of the Wiley water works?

A. I have heard it so charged.

Q. You will swear you have not interested yourself to a great extent in trying to defeat aldermen who were opposed to the Wiley water works or to defeat their election?

A. For the reasons I have stated.

Q. Will you swear you haven't interested yourself extensively to defeat candidates for aldermen who were opposed to the Wiley water works?

A. It was not because they were opposed to the Wiley water works.

Q. I didn't ask you because. I asked you if you have not done so.

A. Let me answer the question and I will answer it.

Q. It can be answered by yes or no.

Mr. McBRIDE: I think the question is unfair.

The WITNESS: I don't know of any such aldermen being pushed. I will say I have no special interest in the Wiley Water Works Company whatever.

Q. Have you not interested yourself extensively in this city at past charter elections to defeat candidates for aldermen who were opposed to the Wiley water works?

A. Well, I think I have.

Q. And at thw present time you consider yourseld, do you not, a friend of the Wiley water works?

A. I am not——

Q. (Interrupting.) And an advocate of their rights and interests as you understand them in this city?

A. I only want them to be dealt with fairly; that is all.

438 Q. You strenuously opposed the extension of the city water works, did you not?

A. In the manner as proposed; yes, sir.

Q. Didn't you as a matter of fact strenuously oppose the extension of the city water works?

A. As it was proposed by the present council.

Q. Is that the way you desire to have your answer stand?

A. Yes, sir.

Q. You decline to answer that question by yes or no?

A. I would like my own way of answering the question; I presume I have the privilege of doing so. I certainly have no desire to be misrepresented, and that has been the intention of certain men to do that right along in this city.

Q. You say you have been a constant user of the water from the Wiley water works for how many years?

A. Oh, I guess three and a half years.

Q. Last past?

A. Yes, sir.

Q. You say that the water during that entire time was pure?

A. No, sir.

Q. And good for domestic and culinary purposes, do you?

A. I didn't say so.

Q. What did you say, then, as to whether being pure and suitable for domestic and culinary purposes during the entire time which you have used it?

A. The entire time that I have been a consumer of the Wiley water works the water has been entirely satisfactory to me with the exception of one time.

Q. When was that?

A. Last summer.

Q. For how long a time?

A. For a few weeks.

439 Mr. McBRIDE: Last summer or a year ago last summer?

A. I guess it was a year ago last summer.

Q. Was it the summer of 1887?

A. Yes, sir; it must have been last summer.

Q. Then it was not a year ago last summer?

A. I mean the summer of 1887.

Q. You mean the summer of 1887?

A. Yes, sir.

Q. For how long a time during the summer of 1887 wasn't it satisfactory to you?

A. Well, I might say ten days.

Q. Are you able to specify what month it was?

A. I think it was in August.

Q. What was the matter with the water at that time?

A. Well, sir, the water was not clean; it was not good water.

Q. Is that the only time during the ti-e you have been a consumer of the wa-er that it was not clean?

A. I will say prior to that time and subsequent to that time the water was entirely satisfactory as far as I know.

Q. What kind of water would be satisfactory to you, clear water or impure water?

A. I mean good, pure water, clean water.

Q. When you say it was satisfactory to you, you mean that it was pure, good, clear water?

A. Yes, sir.

Q. All of the time?

A. Yes, sir.

Q. Did you ever have occasion to use water after a fire in this city prior to last January?

A. Yes, sir.

Q. It was always pure and clear after a fire?

A. Yes, sir; every time.

440 Q. If several witnesses who were consumers—for instance, Mr. Schofield; you are acquainted with him?

A. Yes, sir.

Q. An ex-mayor of this city?

A. Yes, sir.

Q. If ex-Mayor Schofield testified that after fires it was the constant practice to find impure water, then you would say he was mistaken, would you?

A. Well, I have heard him make that statement; I have never had any trouble with that.

Q. You are on the same line of pipe that he is, are you not?

A. I suppose I am.

Q. If it should be a fact that for the past three and a half years all the water which passed through the mains and the pipes of the Wiley water works came from Grand river, would you say it was pure water?

Mr. McBRIDE: I object to that question as being incompetent and immaterial and a hypothesis, not based upon anything proven; it is not cross-examination.

The WITNESS: I have been a user of that water and it was entirely satisfactory to me only upon that one occasion.

(Last question read by the stenographer.)

A. I should say not.

Q. If a third of the water which passed through the mains and pipes during that time came from Grand river, would you say that it was pure water?

Mr. McBRIDE: It is all under the same objection formerly made.

A. I should consider it not pure water.

Q. Your brother runs a drug store in this city, does he not?

A. Yes, sir.

Q. Don't you know as a matter of fact he discontinued the
441 use of the Wiley water because it was impure and not fit to use in his drug store?

Mr. McBRIDE: I objected to that as incompetent.

A. I understand the reasons were for other reasons than that the water was impure. He had other reasons for disconnecting.

Q. Did you understand that those w-re among his reasons that the water was impure and not fit for use, why he disconnected?

A. I didn't understand it in that way.

Q. Then you had not heard him complain about the water being impure, have you?

A. I guess I have.

Q. You know, as a matter of fact, that he put in a drive-well during the year 1887, at his place of business, in order to get pure water to use in his store?

A. I d-n't think that he did.

Q. Don't you know that he did?

A. I think not.

Q. Did you put a drive-well in at your own house for the purpose of getting water to use?

A. Yes, sir.

Q. When was that?

A. Well, during the time that I found the water bad.

Q. That was during the ten days?

A. Yes, sir.

Q. Do you swear you put your drive-well in during the ten days you have testified to here?

A. Along about that time.

Q. I asked you if it was during that ti-e.

A. I could not tell.

Q. You didn'- put a drive-well in in order to get pure water to use for your family?

A. I had done so in case that we had more b-d water I can resort to the pump.

Q. Have you had any sickness in your family since you
442 have been using Wiley water?

A. We have.

Q. To what extent?

Mr. McBRIDE: We object to it as incompetent and not cross-examination.

The WITNESS: My family has never been so healthful as since I lived in the Fourth ward.

(Last question read by the stenographer.)

—. Your wife was sick for a considerable length of time, was she not, during the past year and you took her to Battle Creek for treatment, did you not?

A. Yes, sir.

Q. Was she a consumer of the Wiley water prior to her going to Battle Creek?

A. Yes, sir.

Q. Has she been since?

A. Yes, sir.

Q. Wholly and without the use of any other water?

A. We have used no other water but the Wiley water?

Q. Have you used it from the hydrant without boiling it since then?

A. Yes, sir.

Q. Have you at any time that you have been using Wiley water found any bugs, fish, or reptiles in the water?

A. No, sir.

Q. You say you had a conversation with Mr. Koeltz. When do you fix that time?

A. I should think it was about March of 1887.

Q. Do you swear that the common council had not voted to extend the works at the time you had this conversation with Mr. Koeltz?

A. They may and they may not. I am not certain about that.

Q. Will you swear the common council hadn't voted to extend their works when you had the conversation with Mr. De Spelder?

A. Well, they may have as to one portion of the extension; I am not sure.

443 Mr. NORRIS: How much of the time do you stay at home, at your house?

A. Well, I am home a good deal of the time. I may be off occasionally; my business brings me out of town occasionally.

Q. How extensive is your personal examination of the water used in your house?

A. Well, considerable.

Q. Do you see it any oftener than you see it on your table or when you take a drink there?

A. Yes, sir; I watch the water pretty close.

Q. For what reason do you watch it so close if it is good water all the time?

A. Well, there has been a good deal said about the impurities of the water, and having four little folks that drink water I have watched it for that purpose.

Q. Do you use a filter?

A. No, sir; I do not. We had a filter, but it is lost.

Mr. NORRIS: I think with reference to the witness's testimony as to his conversation with a deceased alderman that I will interpose an objection to that on the ground that it is incompetent under the statute.

Redirect examination by Mr. MCBRIDE:

Q. Your opposition to the extension of the city water works that you have spoken of, is it out of any favor to the Wiley water works?

A. No, sir; the opposition that I made to the extension was for other reasons than friendship to the Wiley Water Works Company.

Q. What were those other reasons?

444 A. Well, a large amount of money had been raised by taxation, not directly for that purpose, placing an exorbitant tax upon the city, which I believe to be an injury to the city

of Grand Haven, which amount of money was expended without the approval of the people in the extension of the water works, and I did not believe in that way of managing city affairs.

Q. What was your opinion whether there was a public necessity for extending the city water works?

Mr. NORRIS: That is objected to as incompetent. The common council are to determine that.

A. Well, I hardly thought that it was necessary.

Q. Your attention was called to the action of your brother in the drug store changing from the Wiley to the city water works, so called?

A. Yes, sir.

Q. You said there were other reasons than that the water was bad. State what those reasons were, if you know.

Mr. NORRIS: I object to it as hearsay.

A. Well, my brother often stated to me that the water was so much cheaper, could be furnished so much cheaper than by the Wiley Water Works Company.

Q. That was the reason of his changing?

A. Yes, sir.

Q. Furnished cheaper by the Wiley works?

A. Furnished cheaper by the city works.

Q. In speaking about the extension of these works what do you know, if anything, about the council's refusing to submit the question to the popular vote of the city whether it should be extended or not?

Mr. NORRIS: That is objected to, as there is better evidence.

Q. Whether a request has been made to the council to submit it to the popular vote whether it should be extended or not.

445 Mr. NORRIS: That is objected to.

A. There has been an earnest and general demand to have the matter submitted for the approval of the people, which has been refused by the council.

Q. Is it a fact that they have gone on here against the protest of the people and extended these works?

A. Against the protest of a large number of good citizens.

Recross-examination by Mr. NORRIS:

Q. Isn't it a fact that the question of this extension of the city water works has been made an issue in city politics?

A. Well, I don't think it has been for the advancement of any men. I think it has been as an issue; yes, sir.

Q. It has been an issue in city politics?

A. Yes, sir; it has been made so in that way.

Q. As a matter of fact on that issue hasn't there been a majority of the aldermen of the common council of the city of Grand

Haven returned in favor of extending and completing the city water works?

A. I will state honestly that I think so; yes, sir.

By Mr. SEELEY: You say that the common council refused to entertain or refused to submit the question to the vote of the people in this city upon the extension?

A. Well, that can be implied from their action.

Q. Then you don't know as a matter of fact whether the common council have refused or not, do you?

A. As official action I don't know as they ever did.

446 Q. Do you know whether the common council ever took official action one way or the other upon that question?

A. Well, I don't think the council have ever taken any official action upon that particular point.

Q. Do you know whether the council have ever con-dered the question without taking any action or not?

A. I have understood that they have been considering the question of submitting the matter.

Q. I ask you if you kn-w.

A. I think I do; yes, sir.

Q. When was that?

A. Well, from aldermen last year—conversation with several alderman last year.

Q. Then it is by conversations outside that you derive your information?

A. From the aldermen.

Q. You haven't exami-ed the records or proceedings of the common council with a view -f ascertaining whether they have refused or not, have you?

A. I have not thoroughly.

Redirect examination by Mr. MCBRIDE:

Q. Y-u speak of its being an issue in politics. Has the question ever been submitted to a vote of the people?

A. No, sir.

Q. As to whether the works should be extended or not or whether the majority was in favor of it or not?

A. No, sir.

Recross-examination by Mr. NORRIS:

Q. It has been known and well known in the city elections that certain candidates for aldermen of the city of Grand Haven were in favor of the extension and completion of t-e city wat-r works?

A. Yes, sir.

Q. Those aldermen have been elected to the common council?

447 A. They have.

Q. As against parties who were known to be opposed to that policy?

Q. No, sir; I don't think there were any men nominated on the other side.

Q. Then the sentiment which you say -s opposed to the extension -f the city works did not put up any candidates to run against those candidates who were known to be in favor of extending the city water works? Do I understand that to be your statement?

A. I will answer that in this way: I think the people who have opposed the policy, the men who were pushing the city water works, did not take the matter in hand directly in opposition to the men that were pushing the water works.

Q. Upon that issue alone?

A. Upon that issue alone they *w*llowed the men that pushed the city water works to carry the thing as they pleased.

By Mr. SEELY: Did you not publicly announce the day following the charter election last spring that you would give it up; that the people in this city were in favor—a majority of them were in favor of extending the city wat-r works?

A. I did; yes, sir.

Q. *Na* And that the election demonstrated that fact that was held the day before?

A. Well, I came to that conclusion fr*?*om the fight that was taking place in the city.

Q. Did you so state?

A. Not in the *3*ay that y-u put it. I should not hardly want to answer in the way you put it.

Q. What way do you w-nt to answer?

A. I came -o the conclusion the way the election was *w*ngineered and pushed in the city by certain men, that it -as perfectly useless for the person that opposed that policy—perfectly useless for them to object any longer.

448 ANDREW J. EMLAW sworn as a witness on behalf of the defendants.

Direct examination by Mr. NORRIS:

Q. Where do you reside?

A. Grand Haven, Michigan.

Q. What is your business?

A. Just at present I am in the gas business, you might say.

Q. How long have you lived here?

A. 39 y-ars.

Q. Are you acquainted with a corporation known as the Grand Haven water works, sometimes spoken of as the Wiley water works here?

A. Yes, sir.

Q. Were you present at what has been spoken of in this case as the test of the Grand Haven water works?

A. I was; yes, sir.

Q. Will you state what they *or* attempted to do with thos- *we* works at that time with regard to throwing water?

A. Well, as I understood it, they were to throw six streams one hundred feet high simultaneously; we went there to see them do it, but they failed.

Q. How high did they throw the water?

A. When they threw one stream I have it recorded that they threw it seventy feet high.

Q. Did you measure the height of that stream?

A. I did; yes, sir.

Q. When they were throwing six streams simultaneously how high did they succeed in throwing the water?

A. Oh, well, from forty to fifty feet; somewhere along there; I wasn't particular about that.

Q. From the place where this water was being thrown did you go at *at* this time of the so-called test to the pump-house of the Grand Haven water works?

A. Yes, sir.

Q. I forgot to ask you in the opening of the examination.

449 You are and have been a millwright, as I understand?

A. I am a millwright by trade.

Q. And are familiar with the working of machines?

A. Yes, sir.

Q. How was the machinery and pumps of the Grand Haven water works working at the time of this test, when you went to the pump-house?

A. When they were working slow, in ordinary capacity, they were working very nicely, but when they speeded them up, I thought they would carry themselves out of the building; there was no water supply.

Q. In other words, the pumps pounded?

A. Working on a vacuam all the while.

Q. At the time you went there were the pumps working from the river?

A. Well, I think they were, but I wouldn't swear positively, but I think they were.

Q. Did you make a request of the engineer at that time that he shut of- the river water?

A. Yes, sir.

Q. Whether or not that was done?

A. Well, they said it was; that was all I know about it.

Q. Were the pumps then stopped and the well which they have there allowed to fill up?

A. Yes, sir.

Q. What was done then?

A. We were going to see how long the well would last with one stream, and we exhausted the well in fifteen minutes with one stream.

Q. That is after the well had been allowed to fill up and before the pumps were started throwing one stream?

A. One stream; yes, sir.

Q. It exhausted the well so that the pumps sucked air in fifteen minutes?

A. Just fifteen minutes.

450 Q. What was the size of this stream that they were throwing?

A. Well, now, my impression is an inch; I wouldn't be positive.

Q. For how many feet of hose?

A. One section.

Q. One section of hose?

A. Yes, sir.

Q. That is commonly understood to be fifty feet?

A. Yes, sir.

Q. Have you ever seen these Wiley water works throw water one hundred feet from six streams simultaneously?

A. No, sir.

Q. Have you any knowledge of the quality of the water which has been supplied by the Grand Haven Water Works Company since they started in here to consumers?

A. Well, no; not only from a man that I have at my gas works who's*e* used it for culunary purposes, and he had to go and put a well down; he couldn't use it.

Q. You haven't used it yourself?

A. No, sir; I never used it myself.

Q. Have you examined the water that has been drawn from the hydrants and pipes of the Grand Haven water works?

A. Yes, sir; I have examined them, but I don't know anything about it, only what that man told me, that he had to put his well down?

Q. At the time of this test of the Grand Haven water works, did you observe the quality of the water that they were throwing at that time?

A. Well, I think it was partially river water at that time.

Q. Well, what was its general nature and appearance?

A. It was reddish.

Q. Roil*ly*?

A. Yes, sir; I think it was river water; at least they claimed it was.

Cross-examination by Mr. HOWELL:

Q. Who claimed it was river water?

451 A. Well, that gentlemen that was here, Mr. Underwood. I think he said it was river water; I think was here said it river water; I think he said it was river water; I think there was no question about that; we all understood that it was river water. I could not say that it was, but that is what we understood.

Q. Were you a member of the common council at that time?

A. Yes, sir.

Q. Are you still?

A. No, sir.

Q. How long did you continue in the council after the test?

A. I think about a year or a little over.

Q. This test was when—what time of the year?

A. Well, it was in February, 1884, or 1885; I am not certain. I have a record of it in my diary; I have it home; I haven't it wi h me.

Q. January or February?

A. I think it was January or February of 1884 or 1885; I would not be positive about that.

Q. Were other members of the common council present at the test?

A. There was two or three of them; yes, sir.

Q. Do you redemember who they were?

A. Mr. Blocker, Mr. Safford, and I think there was another one; I don't just remember who he was.

Q. What kind of a day was it, as you remember?

A. Well, the mercury was below zero.

Q. How was it as to wind?

A. It was not a very windy day; a very cold kind of a day.

Q. Wasn't there some wind at the time?

A. There might have been a little; not strong at all.

Q. Was there snow upon the ground?

A. Some; yes, sir.

Q. Did you understand then or immediately after that there was any trouble with the pumps when they were working during those tests—any accident to them?

A. No, sir.

452 Q. You heard of nothing of the kind?

A. No, sir.

Q. Did you hear of any chips being found in the pumps after the test was over?

A. No, sir.

Q. You never heard of it?

A. I heard them testify to that a spell ago; I happened to be in the room when they testified to it.

Q. You never heard of it until it was given in testimony in this case?

A. No, sir.

Q. Did you at the time or within a day or two, or at any time after, learn that a leak occurred in one of the mains or pipes?

A. Oh, yes; I heard it testified to.

Q. So that you didn't know whether any such accident had, in fact, happened to the pipes?

A. They said nothing to us about it.

Q. You say you never saw any test since that occasion to know how many streams and how high the Wiley water works could throw water?

A. No, sir.

Q. Did the pumps pound, that you speak of, during all the time of the running?

A. When they run any speed; yes, sir.

Q. When you supposed they were drawing river water, then did they pound also?

A. I couldn't say whether it was river water or not?

Q. Well, a- the time, as you supposed, that they were drawing river water did they pound?

A. Yes, sir; when they were testing. When we went to the house we saw them speed, as they claimed, to get the pressure. I wouldn't swear positively that they were drawing river water when we were at the house; we requested them to turn it off.

Q. They said they did?

A. Yes, sir; they said they did when they came back.

Q. What you know about the quality of the water is simply what your employee has informed you?

453

A. And I have drank it in the gas-house. I own the gas-house, and occasionally I would take a drink of that water.

Q. Otherwise you know nothing about the quality except what that man told you?

A. No; I haven't examined it.

Q. Do you know of the wa-er from these works being used at fires by the city during the time you were alderman?

A. No, sir; I was not present at any of the fires that I know of.

Q. You don't know of is being used?

A. No, sir; I don't of my own knowledge.

Q. Have any of the other aldermen told you that it had been?

A. I think I heard it. I don't know that any aldermen told me. I know that they used it at the depot fire.

Q. You understood when you were alderman that the city were using it at fires?

A. I think they used it occasionally.

Q. They used it at all the fires that occurred while you remained in the office?

A. No; I think n-t. A fire occurred down here where they got onto the old works.

Q. On more than one occasion?

A. Well, I couldn't say that.

Q. Do you remember the time that the -reight-houses were burning here?

A. Yes, sir.

Q. Were you at that fire?

A. Yes, sir.

Q. Did you know about the city's using water from these water works at that time?

A. I think I did. I couldn't swear to it, but I think they did.

Q. You understood aso at the time?

A. I did; yes, sir.

Q. Do you know Mr. Holmes, Alva L. Holmes, one of the parties to this suit?

454

A. Yes, sir.

Q. Where does he live?

A. I think his home is in this city.

Q. *Os je* a citizen of this State?

A. He has been and I think he is yet.

Q. He has bee- a citizen here for a good many years?
A. Quite a good many.

Redirect examination by Mr. NORRIS:

Q. Had you any orders or directions from the common council of the city of Grand Haven to attend this test?
A. I think not. I think Mr. Wiley came and made a request of us to attend it, or some one representing hi-.

Mr. MCBRIDE:

Q. Was there any representation of the council by order of the council?
A. Not that am aware of.
Q. Did you as a me-ber of the council know that a proposition or notice had been served by Mr. Wiley that the test would be made?
A. Served upon the council?
Q. Yes, sir; in its capacity as a council.
A. No, sir; I did not.

HENRY D. IRISH, being sworn as a witness on behalf of the defendant:

Direct examination by Mr. SEELEY:

Q. Where do you reside?
A. In Grand Haven, at the Cutler house.
455 Q. What is your business?
A. Hotel-keeper, I suppose, is what they call me.
Q. You are proprietor of the Cutler house?
A. I am running it.
Q. For how long have you run it?
A. For six years nearly.
Q. Are you acquainted with the water furnished by the Grand Haven water works?
A. The Grand Haven water works?
Q. Occasionally called the Wiley water works.
A. Yes, sir; we had it in here—well, I don't remember how long; at any rate, we put it in just as soon as we could after they got it started.
Q. For how long did you keep it in the house?
A. To set the exact time I should have to get the books?
Q. For how long?
A. Two or three years.
Q. At the hotel—the Cutler house?
A. Yes, sir.
Q. What have you to say as to the quality of the water furnished you by the Wiley water works from the time it was put into this house down to the time you stopped using it?
A. Well, when it was first put in I would not ask for better water than it was then.
Q. For how long a time did it continue?

A. I couldn't tell you whether it was six months or over that that it continued so.

Q. What occurred then?

A. Well, it began to taste of the river—what I call river water—a kind of a rotten-wood taste, like.

Q. For how long a time did that condition of things continue?

A. Well, that continued until we took it out—no; I wouldn't say that; this was a year ago last summer, and that summer it was so bad that our guests complained, and I went a- put some
456 wells down—two wells—in the yard, so as to use the water for drinking out of the wells, and then since then I don't know anything about it, for I don't believe I have taken a swallow of that water since then; it has been all out of the well.

Q. Was the water worse at times during the time you used it?

A. Well, it would be worse after a fire or anything of that kind.

Q. For how long a time did that condition continue after a fire, when it was worse?

A. Well, it would continue until we emptied our tank. We could empty the tank in a few minutes, and as soon as the pipes got emptied again and it came up fresh it would be all right.

Q. How long would that continue before the pipes would give you fresh water?

A. Well, I couldn't tell you exactly. It would take a half a day or maybe a day to get them all empty—the pipes.

Cross-examination by Mr. HOWELL:

Q. This was a year ago last summer when you found the water was so bad as you speak of?

A. Yes, sir.

Q. It was a very dry season, wasn't it, at that time?

A. Well, I don't remember, but I think it was a little dry.

Q. That was along in August?

A. Well, the latter part of July or the first of August.

Q. Do you recollect of people using the water—using it on their lawns—and drawing very largely and unusually from the water at that time?

A. Well, I spoke to this gentleman—I think he was agent at the time—and he said they were using a good deal of water on the lawns, and at times they could not get along without drawing on the river.

Q. That was on the occasion that this bad water occurred?

A. Yes, sir; that they complained to me so about the taste of the water.

Q. That continued that season about how long?

457 A. I don't know. We stopped using it for drinking purposes, but we used it for all other purposes.

Q. Then for culinary purposes you don't know anything about it since that time?

A. I don't know anything about it; it went all right in the boiler and such places.

By Mr. McBRIDE:

Q. You have since connected with the city works?

A. Yes, sir; this fall, about a month ago. We used it up until the first of last month, I think—September.

Q. As a matter of expense, how do the rates as given you by the city compare?

A. Well, really they have not given us the rates yet. They were to meet and give us the rates, but they have not done so.

Q. Did you have any understanding as to how the cost would compare?

A. It would be about the same. They said about one hundred dollars a year; they thought it would be about the same. I told them of course we should not use as much in the winter; we would like to have a little reduction in the winter time.

Q. Do you know anything about whether the present city works have connected their pumps with the river?

A. I don't; they tell me not. I have asked several of the officers and they say no; they have not—that is, they are not using river water at all.

Q. You don't know whether they have connections directly with the river or not?

A. No, sir; I don't know personally.

Q. If they did and should use that I suppose it would render your tank and the connections in the house in the same condition that they were with the Wiley works?

A. I should consider it so if it was river water.

458 Redirect examination by Mr. SEELEY:

Q. How does the city water which you are now using compare with the water furnished by the Wiley works?

A. It is softer. The wash-women say it is a great deal softer than the other water.

Q. It is clearer and better for the purposes for which you use it?

A. Yes, sir; the engineer would be a good man for you to call upon for that. As to the sediment that collects in the tank, he cleans that out every day or every few days.

Recross-examination by Mr. HOWELL:

Q. Do you consider it clearer than the well water from the Wiley works?

A. I don't know that it is any more so than that was when it first started up there, for it was very clear and nice when it first started

HENRY BAAR, being called as a witness on behalf of the defendants.

Direct examination by Mr. SEELEY:

Q. Where do you reside?

A. Grand Haven.

Q. How long have you resided here?

A. 28 years.
Q. What is your business?
A. Pharmacist.
Q. You have a place of business in this city, have you?
A. Yes, sir.
Q. Are you now using water from the city water works, so called?
A. The Grand Haven city water works?
Q. Yes, sir.
A. Yes, sir.
Q. For how long a time have you been using it?
459 A. I was connected, I think, the 17th of August.
Q. Have you made any chemical or other examination of the city water since you have been using it?
A. To a certain extent I have.
Q. What is the result of that examination?

Mr. McBRIDE: I will interpose an objection that it is incompeten. and immaterial.

The WITNESS: Well, I was told that the——

Mr. HOWELL (interrupting): He didn't ask you for what you supposed.

The WITNESS: I made an analysis—not an analysis exactly, but a test for sewerage matter. The tests that I used, perhaps, are not very accurate. I am not an analytical chemist, and I only used the ordinary tests for those purposes, and I found no sewerage matter in the water or no organic substance either.

Q. From the examination you gave and the tests which you applied, what, in your opinion, is the nature of the water as to purity?

Mr. McBRIDE: That is objected to as being incompetent and immaterial.

A. Well, I should call it first-class water.
Q. You say you disconnected some time in August last?
A. I think it was upon the 17th of August.
Q. At the time of connecting with the city water works were you connected with what is known as the Wiley water works?
A. Yes, sir.
Q. For how long a time had you been using water from Wiley water works in your drug store?
A. I guess I used it three or four years.
Q. What have you to say as to the quality of the water furnished you by the Wiley water works during the time you were using it?
460 A. Well, up to June 30th, 1887, it was first class, but after that it wasn't very good.
Q. What was the reason of your discontinuing the use of the Wiley water works and connecting with the city water?
A. I didn't think that it was fit to use, the Wiley.
Q. What have you to say as to your having paid rentals for the

use of the Wiley water in advance at the time you discontinued its use?

Mr. McBRIDE: That is objected to as immaterial and incompetent.

A. I think I paid it up to the first of October.

Q. Then, as a matter of fact, you did not continue the use of the Wiley water and take the city water because the city water was cheaper?

A. No, sir; I did not.

Cross-examination by Mr. McBRIDE:

Q. You say you have had nothing to do with the water since the 17th of August last?

A. I think it was the 17th of August.

Q. Have you ever examined the water or had your attention called to the condition of the water previous to that time, the city water?

A. I had heard different conversation in regard to it.

Q. Had your attention been called directly to the water, as to the purity of it or otherwise?

A. No, sir; not directly.

Q. You never saw the water impure—any impurities in it?

A. I don't know whether I did or not—that is, the Grand Haven city water.

Q. Was your attention ever called to the tank used by the drug store of Hutty and Dickinson at the time they had fish in there?

A. No, sir.

461 Q. As to the impurities manifest in the water there?

A. No, sir.

Q. I understand you to say as a chemist you found no substance in the water whatever; it was absolutely pure?

A. -*ee*, sir.

Q. Chemically pure?

A. No, sir; not chemically pure; there is no such thing as chemically pure in water; to a certain extent.

Q. You found that the *4*ater was pure, except what?

A. Well, I tested for sewer gas, and, as I stated before, I do not want to be understood t-at I am an analyetical *cmchen*ist; I am not; but I tested it to certain extent, and I tested it for sewer gas and found none. I found no sewer gas at that time.

Q. Did you at any time?

A. No, sir; I only tested it that once.

Q. What was the nature of that test?

A. Well, I call it Dumblinson's nitrate of silver test.

Q. Was that before you connected with the works or after?

A. After.

Q. At whose request?

A. My own; to satisfy my own curiosity.

Q. When did you first state this to Mr. Seeley?

A. I never — to Mr. Seeley about this until he brought in some water of his own from a drive-well that he wante- me to test for him. I think that was the first time I spoke about it. I think I told Dr. Reynolds or some other other person, and perhap- -e heard of it in that way.

Q. Had you ever made the same test with the Wiley water?

A. No, sir; I did not.

Q. You never had?

A. No, sir.

462 SHERMAN H. BOYCE, being sworn as a witness on the part of the complainants.

Direct examination by Mr. HOWELL:

Q. Where do you reside?

A. In this city of Grand Haven, sir.

Q. How long have you resided here?

A. About 21 years.

Q. What is your occupation?

A. Well, it has been lumbering and it is now, if anything.

Q. Are you a householder, a housekeeper, with a family; do you reside in this city?

A. Yes, sir.

Q. Are you acqua.nted with the system of water works here in this city, sometimes called the Wiley water works?

A. Well, I am acquainted with it to the extent that I have been using it in my house.

Q. How long have you used that water from that system?

A. Well, for family use, since the 2nd day of February, 1887.

Q. For all purposes of family use, cooking, drinking, etc.?

A. Yes, sir.

Q. What have you to say as to the quality of the water as you have found it during that time and since you have commenced using it?

A. Well, as far as I am able to determine about the water, with one or two short exceptions, short intervals, the water has been very nice, perfectly clear in appearance, and perfectly satisfactory to taste.

Q. What were t-ose ecxceptions that you have in mind?

A. Well, the appearance of the water was dark color and roilled up and was produced, as I was told by the agents of the works, from the use of water at fires—excessive use of water—that would
463 take from one to three hours, I think never longer than three hours, to reinstate it to its normal and natural condition.

Q. The use of water during the extinguishment of fires in this city?

A. Yes, sir. I know nothing of that except as I was told by the agents.

Q. These disturbances in the water that you speak of lasted how long before the water became clear?

A. Well, as near as I can remember, I don't think any time we

were more than three hours cleaning our pipes. We usually opened our hydrant and pipes and let it run for a space of a few minutes, or an hour *ro* three hours, and I think on not more than three occasions was the water disturbed in that way.

Q. State whether you ever discovered anything unhealthy or deleterious to health in the water since you have used it.

A. I never have, sir.

Q. You said you have used it for culinary purposes in your house since the spring of 1887?

A. Since the 2nd day of February, 1887.

Q. And are still using it?

A. Yes, sir.

Cross-examination by Mr. SEELEY:

—. Upon how many occasions have you ever discovered that the water was discolored after a fire?

A. Well, I just stated I thought not to exceed three. I would not say positively about that, but I am inclined to think it was more than that; but yet *& on* think we have had any disturbance to notice particularly more than that time—more than three or four times.

464 Q. During the year 1887 you were at home sufficiently so that you could judge, after all the fires that were had in this city here?

A. During the year 1887?

Q. Yes, sir.

A. I don't think I was absent to exceed three days at any time, and not more than ten days during the whoole year.

Q. You don't undertake to state that there was more than a hal- a dozen fires in 1887?

A. I don't know anything about the fires. I have no record of them.

Q. Have you a well at your place?

A. No, sir.

Q. You have been considering the propriet- of putting one do-n?

A. I talked some about it last spring a year ago.

Q. For the purpose of getting purer water?

A. No, sir; not for that purpose.

Q. You say you used the water and have since 1887 for al- purposes in your family?

A. Yes, sir.

Q. Do you use it raw or do you boil it before drinking it or use it raw before drinking? You do not experience any inconvenience from it at all?

A. Not at all.

Q. Have you ever discovered, from the time you have used it, bugs, fish, or reptiles or anything of that kind?

A. I never saw anything of that kind.

465 DERK BAKKER sworn as a witness on behalf of the complainant.

Direct examination by Mr. HOWELL:

Q. Where do you reside?
A. Grand Haven.
Q. How long have you lived here?
A. Oh, 17 years.
Q. Are you a man of family and keep house?
A. Yes, sir.
Q. Are you acquainted with the Grand Haven water works, sometimes called the Wiley water works?
A. I am using the water.
Q. How long have you used it?
A. Well, something over two years; I don't recollect just how long; it is over two years.
Q. For what purposes have you used it?
A. Well, for all purposes—cooking and drinking.
Q. Cooking, drinking, and all household purposes?
A. Yes, sir.
Q. How have you found the quality of the water since you have been using it?
A. Well, found it all right; I found it pretty good water.
Q. Have you ever found anything ungealthy about it in using it?
A. No, sir; only after a fire a little while; it was kind of dark for a little while; for three or four hours maybe, and then it would be just the same again.
Q. Just the same; good again, do you mean?
A. Yes, sir; just the same as always.
Q. You found nothing unhealthy about it?
A. No, sir; in the summer time it is not quite cold enough to drink as out of the pump; I have got good pump water; a drive-well, and I drink out of that because it is colder water.
Q. That is the only reason that you get it out of the pump instead of from the water works?
A. That is the only reason, because it is colder; in the winter time I never touch the pump.

466 Cross-examination by Mr. SEELEY:

Q. You can't give the date when you began to use this water?
A. No, sir, I can't; I am sure I don't recollect.
Q. Is the temperature of the water the only difference you noticed between the water furnished in the summer and that furnished in the winter; is the difference in the coldness of the weather the only difference you notice in the water between the summer and winter?
A. That is all the difference; in the summer it is not cold enough; it stands too long in the pipe, I guess, and the pump water—I have got good pump water in my drive-well, and we drink more out of that because it is cold; it is nice and cool, and the water works is not cold enough.

Redirect examination:

Q. You are still using water for your household purposes, to cook, from the Wiley works?
A. Yes, sir.

A. M. COSGROVE, being recalled as a witness on behalf of the complainants.

Direct examination by Mr. HOWELL:

Q. You are the superintendent of the Grand Haven water works, sometimes called the Wiley works?
A. Yes, sir.
Q. How many consumers or takers of that water have there been in all?
A. I think in all 265.
Q. How many of those have used the water in their households for culinary and drinking purposes, household purposes?
A. Well, I should think about two-thirds of that number.
467 Q. How many consumers or patrons have the works now?
A. I think about 140 or 145.
Q. Since the cit- extende- their mains and pipes some months ago—a few months ago—how man- of your consumers have they taken from you?
A. I couldn't say positively; I think about forty-five or fifty.
Q. As many as forty-five?
A. As many as forty-five; yes, s-r.
Q. Do you know Mr. Alva L. Holmes, one of the parties in this case?
A. Yes, sir; I know him when I see him.
Q. Where does he live?
A. I think he lives in Grand Haven.
Q. How long has he lived here?
A. I couldn't say as to that.
Q. How long have yo- known o- his living here?
A. Three years.
Q. He is a citizen of this State, is he?
A. Yes, sir.
Q. Where is he now?
A. The last that I heard he was in Oscoda.
Q. In this State?
A. In this State.
Q. Do you know whether the city water works had connected their works with Grand river?
A. Yes, sir.
Q. Have they or have they not done so?
A. They have connected the suction pipes.
Q. So as to enable them to draw water from Grand river?
A. Yes, sir.
Q. What part of the city?
A. Well, the lower part—the west part.

Q. On that suction that they have connected with the rive—is that below or above the sewerage of the city?

A. Below the sewerage.

Cross-examination by Mr. SEELEY:

Q. You don't mean to be understood as saying that the city are drawing water from river, do you?

A. No; not as I know of.

Q. How do you know that they have made this connection with the river?

A. W-ll, I was there and saw it.

468 Q. You saw them make it?

A. -es, sir.

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Company *vs.* City of Grand Haven *et al.* Proofs. Filed Dec. 28, 1888. C. L. Fitch, clerk.

469 *Articles of Incorporation of the Grand Haven Water Works Company.*

Received for record October 25th, 1883.

GEORGE D. TURNER, *Clerk.*

Whereas, at a regular meeting of the common council of the city of Grand Haven, Michigan, held at the council chamber in said city on the 12th day of April, 1883, the following resolution was passed, viz:

"Resolved, That it is expedient to have constructed water works for the purpose of supplying the city of Grand Haven and the inhabitants thereof with water for fire, domestic, and other purposes, but that it is inexpedient for the city of Grand Haven, under the power granted in the charter, to build such works:"

Now, therefore, we, whose names are hereunto subscribed, do hereby certify that we have agreed to and with each other to associate ourselves together, and do make and execute under our hands and seals this certificate and these articles of association, under and according to the provisions of an act of the legislature of the State of Michigan, entitled, "An act to authorize the formation of companies for the introduction of water into towns, cities, and villages in the State of Michigan," and approved April the 3rd, 1869, and, as amended, to form a company under and by the corporate name hereinafter mentioned and specified, for the purpose of supplying said city of Grand Haven and the inhabitants thereof with water for any and all purposes, and do hereby further certify:

First: That the name by which said company or corporation is hereby formed, shall be known in the law, is "Grand Haven water works."

Second: The object for which said company or corporation is

formed is to supply the city of Grand Haven and the inhab-
470 itants thereof with water for any and all purposes, and to contract for, use, and own such lands, buildings, machinery, apparatus, mains, pipe lines, reservoirs, appurtenances, rights, and privileges as may be necessary and convenient for the accomplishing such objects and purposes.

Third: The amount of capital stock of said company or corporation is $60,000, sixty thousand dollars, and the same is divided into one thousand two hundred shares of fifty (50.00) dollars each.

Fourth: The amount of capital stock actually paid in is three thousand dollars.

Fifth: The names of the stockholders, their respective places of residence, and the number of shares held by each, is as follows:

S. L. Wiley, 1,000 shares, Greenfield, Mass.
J. A. Norton, 50 " Tiffin, Ohio.
E. C. Cook, 50 " Appleton, Wis.
C. T. Wiley, 50 " Niles, Michigan.
W. C. Harris, 50 " Gardner, Mass.

Sixth: The operations of said company are to be carried on in the city of Grand Haven, Michigan, in the county of Ottawa. The office for the transaction of business of said company is located in the city of Grand Haven, Ottawa county, State of Michigan.

Seventh: The term of the existence of said company or corporation shall be twenty-five years.

The officers may be elected and by-laws adopted, at the first meeting of stockholders of the company or corporation, and the officers of said company or corporation shall consist of a board of five directors, a president, who shall be one of said board of directors, a secretary and treasurer, and such other officers as the board of directors shall deem necessary.

471 In witness whereof, we have hereunto set our hands and seals this 13th day of October, A. D. 1883.

JAMES A. NORTON. [L. S.]
EDWARD C. COOK. [L. S.]
SOLON L. WILEY. [L. S.]
CHARLES T. WILEY. [L. S.]
WILLIS C. HARRIS. [L. S.]

STATE OF MICHIGAN, *County of Lenawee,* } *ss:*

On this 23rd day of October, A. D. 1883, before me, clerk of the circuit court in and for said county, personally came S. L. Wiley, to me known to be one of the persons who signed and executed the foregoing annexed articles of association, and acknowledged that he executed the same for the uses and purposes therein mentioned.

In testimony whereof I have hereunto subscribed my name and affixed my official seal the day and year above mentioned.

[Seal of Cir. C't, Lenawee Co.]

THOMAS M. HUNTER,
*Clerk of the Circuit Court in and for said County.*

STATE OF MICHIGAN, } ss:
*County of Ottawa,* }

On this 13th day of October, A. D. 1883, before me, a notary public in and for said county, personally came James A. Norton and Edward C. Cooke, to me known to be two of the persons who signed and executed the foregoing articles of association, and severally acknowledged that they executed the same for the uses and purposes therein mentioned.

In testimony whereof I have hereunto subscribed my name and affixed my official seal the day and year above mentioned.

[NOTARIAL SEAL.]

WM. N. ANGEL,
*Notary Public.*

STATE OF MICHIGAN, } ss:
*County of Lenawee,* }

472 On this 18th day of October, A. D. 1883, before me, a notary public in and for said county, personally came Willis C. Harris, to me known to be one of the persons who signed and executed the foregoing annexed articles of association, and acknowledged that he executed the same for the uses and purposes therein mentioned.

In testimony whereof I have hereunto subscribed my name and affixed my official seal the day and year above mentioned.

[NOTARIAL SEAL.]

ORSAMUS LAMB,
*Notary Public.*

STATE OF MICHIGAN, } ss:
*County of Ottawa,* }

On this 25th day of October, 1883, before me, a notary public in and for said county, personally came Charles T. Wiley, to me known to be one of the persons who signed and executed the foregoing articles of association, and acknowledged that he executed the same for the uses and purposes therein mentioned.

In testimony whereof I have hereunto subscribed my name and affixed my official seal the day and year above mentioned.

[NOTARIAL SEAL.]

WM. N. ANGEL,
*Notary Public.*

STATE OF MICHIGAN, } ss:
*County of Lenawee,* }

On this 23rd day of October, 1883, personally appeared before me the above-mentioned Solon L. Wiley, to me known to be the same person described in and who executed the within articles, and acknowledged the same to be his free act and deed for the uses and purposes therein mentioned.

WILLIAM A. UNDERWOOD,
*Notary Public, Lenawee Co., Mich.*

STATE OF MICHIGAN, } ss:
*Ottawa County,* }

473 I, George D. Turner, clerk of said county and of the circuit court thereof, a court of record, do hereby certify that I have compared the foregoing copy of articles of incorporation of the Grand Haven Water Works Company with the original record thereof now remaining in the office of the county clerk of said county, and have found the same to be a correct transcript therefrom and the whole of such original record.

Seal of the Circuit Court of Ottawa Co., Michigan.

In testimony whereof I have hereunto set my hand and affixed the seal of said court, at the city of Grand Haven, this 21st day of June, A. D. 1888.

GEORGE D. TURNER, *Clerk.*

[Endorsed:] Ex. 3, C. H. B., sten.

474 Alderman Safford, from the committee on water works, presented the following schedule of water rates to water-takers and recommended its adoption, subject to such changes as may hereafter be made by the council whenever it shall so elect, to wit:

| | |
|---|---|
| Barber shops, first chair | 1 00 |
| " " each additional chair | 50 |
| Bath tubs, public, first tub | 3 00 |
| " " " second tub | 1 00 |
| " " private, for family use | 1 00 |
| Blacksmith shops, first fire | 2 00 |
| " " each additional fire | 1 00 |
| Bakeries, one faucet | 3 00 |
| Billiard halls, " faucet | 3 00 |
| Butcher shops, " faucet | 3 00 |
| Boarding-houses, special rates. | |
| Dwelling-houses, one faucet | 3 00 |
| Dining-rooms & eating-houses, one faucet | 3 00 |
| " " " " " all additional faucets, each | 1 00 |
| Hotels, special rates. | |
| Bar-rooms & saloons | 5 00 |
| Livery stables, special rates. | |
| Laundries, one faucet | 5 00 |
| Office or sleeping-room | 2 00 |
| Private stables, including carriage washing, one horse or animal | 2 00 |
| Private stables, each additional animal | 1 00 |
| Stores, 22 feet front or less | 2 00 |
| " " " " " where hose is used for washing windows or street-sprinkler (additional) | 3 00 |
| 475 Sprinkler (garden), with hose nozzle, 82 feet front or less | 3 00 |

| | |
|---|---|
| Sprinklers or portable fountains, both running at the same time, 82 feet front or less, in addition to garden-sprinkler rates, each | 2 00 |
| Soda fountains, where water is also taken in store | 3 00 |
| Urinals, in hotels, saloons, or public | 2 00 |
| " private | 1 00 |
| Water-closets, in hotels, saloons, or public, per bowl | 2 00 |
| " " private, per bowl | 1 00 |

All which was adopted by the following vote: Ayes—Aldermen Gallmeyer, Koeltz, Pfaff, Safford, and Vanpell, 5. Nayes—none. Absent—Aldermen De Spelder & Finch.

STATE OF MICHIGAN,
*Ottawa County, City of Grand Haven, Recorder's Office.*

I, William N. Angel, recorder of said city, hereby certify that the foregoing is a true and compared copy from the record of the proceeding- of the common council of said city at a regular session thereof held Sept. 29th, 1887, as recorded on page 125 of Record Book No. 7 of the records of said common council proceedings.

Seal of the City of Grand Haven.

In witness whereof I have hereto set my hand & the seal of said city this 25th day of June, 1888.

WM. N. ANGEL, *Recorder.*

[Endorsed :] Ex. 5, C. H. B., sten.

476 Cutler house, H. D. Irish, proprietor.

GRAND HAVEN, MICH., *Jan.* 17, 1885.

Alderman Safford :

As you are the chairman of the committee to whom was referred the communications of the Grand Haven water works this evening presented to the council to determine whether the council should attend the test proposed, the company respectfully informs the committee that if *it for* the council declines to co-operate with the company in making the proposed test or declines to attach hose to the hydrants as requested that if the city will loan the company six lengths of rubber hose of 50 feet each the company, at its own expense, will furnish the men to operate the same, or, if the committee prefers, will pay the firemen of the city to handle and operate the same and will guarantee the return of the hose immediately after said trial in good condition, without damage.

It is, perhaps, right to further inform the committee that during the test of Thursday a leak occurred of considerable extent in the piping, which used considerable water and which has been thoroughly repaired.

An answer will be called for on Monday, the 19th, at 9 o'clock a. m.

GRAND HAVEN WATER WORKS,
By GEO. VAN PATTEN, *Sup't.*

Served a paper, of which the within is a true copy, on Ald. Safford at Vanderveen's drug store on the evening of Jan. 17, 1885.

GEO. VAN PATTEN.

[Endorsed:] Van Patten's request for 2nd test. Jan. 17, 1885. Ex. 7, C. H. B., sten.

477 Ex. 9.

Grand Haven Water Works
to
The Boston Safe Deposit Co. as Trustee.

Received for record February 14th, A. D. 1884, at 11.45 o'clock a. m.

——— ———, *Register.*

Whereas, at a meeting of the directors of the Grand Haven water works, a corporation organized as hereinafter stated, held at the office of George W. McBride, in the city of Grand Haven, Michigan, Ottawa county, November the 8th, A. D. 1883, all the directors representing all the stock of said corporation present.

And whereas, at said meeting the following resolutions were duly passed by an unanimous vote of the directors of said corporation, viz:

That whenever it is deemed expedient or necessary, the president and the secretary of this corporation be and they are hereby authorized and directed to execute and issue the bonds of this corporation in the sum of seventy ($70,000) thousand dollars, secured by a first mortgage or deed of trust upon all the present and future property, rights and privileges, franchises and assets of the corporation, both that is now owned or may hereafter be acquired by it, said bonds to be of even date with the said mortgage, and be payable on the fifteenth day of January, 1904, with interest at the rate of six per cent. per annum, payable semi-annually at the office of the "Boston Safe Deposit and Trust Co.," in the city of Boston, Mass., said bonds to have proper coupons attached, to be of the denomination of one thousand dollars each, numbered from number one
478 to and including number seventy (70), and shall be redeemable by this corporation at the option of this corporation at any time after five (5) years from their date, upon said corporation giving the holders thereof sixty (60) days' *days'* notice by advertisement thereof three (3) times in some prominent Boston, Mass., newspaper, which shall be deemed good and sufficient notice.

And the president of the corporation and the secretary thereof are hereby authorized and directed to execute the mortgage or deed of trust necessary to secure said bonds.

Resolved further, That the president or treasurer of this corporation *are* hereby authorized and directed to sign orders upon the Boston Safe Deposit and Trust Company, of Boston, Mass., in payment for work and material as the work of construction progresses in com-

pliance with the contract or any future contract or contracts that may be made with any one.

And whereas, the said Grand Haven water works has entered into a contract with the S. L. Wiley Construction Company, of Greenfield, Mass., a corporation organized under the laws of Massachusetts, to construct the water works of this corporation, contemplated by its contract with the city of Grand Haven, Michigan, of the date of November the 8th, 1883, and this board deems it necessary in order in part to pay for the construction of said works to issue the bonds of this corporation to the amount of seventy thousand ($70,000) dollars, to be secured by a first mortgage or *or* trust deed on all its lands, works, pipes, mains, hydrants, assets and property, to the Boston Safe Deposit and Trust Co., of Boston, Mass., as trustees, therefore,

Resolved, That this corporation, the said Grand Haven water works, issue seventy thousand ($70,000) dollars of bonds; that said bonds be drawn payable to bearer; that they be
479 issued of even date with the mortgage hereinafter mentioned, payable on the fifteenth day of January, 1904, and bearing six (6) per cent. interest per annum, payable semi-annually, both principal and interest at the office of the Boston Safe Deposit and Trust Co., of Boston, Mass., each of said bonds to be of the denomination of one thousand dollars ($1,000) *each* and to have proper coupons attached for each semi-annual installment of interest, and to be numbered consecutively from one to and including seventy (70), and which bonds shall be redeemable by this corporation at any time after the expiration of five (5) years after the execution of said bonds and mortgage at the place of payment at the option of the corporation, giving to the holders of such bonds sixty (60) days' notice by three (3) publications thereof in some prominent newspaper in Boston, Mass.

Resolved, That such bonds, so to be issued, shall be engraved and shall be signed by the president and countersigned by the secretary of this corporation, and attested by its common seal, in substantially the following form:

UNITED STATES OF AMERICA.

No. —. $1,000.

Grand Haven water works.

STATE OF MICHIGAN, *City of Grand Haven.*

*Six Per Cent. Bond.*

On the fifteenth day of January, A. D. 1904, for value received, Grand Haven water works promises to pay to bearer one thousand dollars with interest at the rate of six per cent. per annum, payable semi-annually on the fifteenth days of January and July, on presentation and surrender of the coupons hereto annexed, as they respectively become due: principal and interest payable in lawful money of the United States at the Boston Safe Deposit and Trust Company, in the city of Boston.

480 Grand Haven water works reserves the right to pay this bond at any time after five years from its date, on giving sixty days' notice, and a notice published three times in a newspaper in Boston, Mass., that this bond is called in, shall be sufficient.

And after the date at which this bond shall be by such notice called in, interest shall cease.

This bond is one of a series of seventy of like tenor and date amounting to the sum of seventy thousand dollars, first mortgage bonds issued by the Grand Haven water works, and secured by a duly authorized, executed and recorded deed of trust, covering the franchises and property and income, including water rents, due and to become due, of said corporation, made to Boston Safe Deposit and Trust Company, of Boston, Massachusetts, trustee.

In witness whereof "Grand Haven water works" has caused this negotiable bond to be executed by its president, who covenants that he is duly authorized in this behalf, and countersigned by its secretary, and its corporate seal to be hereunto affixed, this — day of ——, A. D. 1883, in the city of Grand Haven, Michigan.

—— ——, *President.*

Attest: —— ——, *Secretary.*

Resolved, That to secure the payment of the principal and interest of said bonds and all lawful expenses incurred in the collection thereof, this corporation shall execute its mortgage or deed of trust to the Boston Safe Deposit and Trust Company, of Boston, Mass., as trustee of and upon the lands, franchises, rights and privileges, property, assets, income and effects of this corporation, now owned or hereafter to be acquired by it, whether real, personal or mixed, and that such mortgage or deed of trust shall contain

481 a covenant of further assurance by which this corporation shall covenant and agree that this corporation will hereafter make, execute and deliver to said trustee such other and further conveyances, mortgages and instruments in writing, as said trustee shall reasonably deem necessary to fully carry out the intent and meaning of said first mortgage or deed of trust, and as will secure to said trustee the water rents hereafter pledged, and especially that upon the request of said trustee, it will execute and cause to be recorded at its own expense further mortgages or deeds of trust to said trustee, of such property as it may acquire after the date hereof, and as may be necessary fully to supplement and convey to said trustee all the security for said bonds intended or meant by said first mortgage to be conveyed, and as will enable said trustee, in case it shall be deemed necessary to do so, to take immediate possession of all mortgage property, and sue for, collect and receipt for any water rents which may hereafter become due this corporation from any and all persons and corporations, including the city of Grand Haven, Michigan, under its contract, which said water rents are hereby pledged to said trustee: such further mortgages or deeds of trust to be in all respects like the said mortgage or deed of trust, first to be executed and be in confirmation of and supplemental to the lien of such first executed mortgage on such hereafter-acquired

property intended to be conveyed by the said mortgage first executed, excepting that nothing in these resolutions or in said mortgage contained shall preclude said trustee from demanding and being entitled to such instruments in writing as shall vest in it possession of the mortgaged premises, or of any other mortgaged property, real or personal, and the title to the income of, or water rents to become due to this corporation.

482 And all said mortgages shall contain the usual covenants of seizure and warranty, and shall provide for the payment of expenses of foreclosure and sale; and further, that the whole of the principal of said indebtedness secured thereby shall become due and payable and the said trustee or its successor may proceed to foreclose the same for the whole amount of such indebtedness whenever default shall be made in the payment of any installment of interest due for thirty days after the same shall become due and payable.

Resolved, That all the water rental to become due to this corporation from the city of Grand Haven, under its contract with this corporation, of the date of November 8th, 1883, or any other or future contract with said city during the continuance of the indebtedness evidenced by said bonds, is hereby pledged to said trustee for the payment of the interest upon such indebtedness.

Resolved, That said bonds having been executed, and the said first above described mortgage having been duly executed, delivered and recorded, said bonds shall be deposited with the said Boston Safe Deposit and Trust Company, the said trustee, subject to the order of and to be negotiated and sold by James A. Norton, the president of this corporation and the financial agent thereof, and he, the said Norton, is hereby authorized to negotiate and sell the whole or such part of said bonds as he shall deem necessary for the purposes of the corporation, upon the best terms he can obtain therefor, and the monies received from such sale of said bonds shall be deposited with said trustee, subject to the order of the president, James A. Norton, or the treasurer, W. C. Harris, in payment for construction as the same progresses under such contract or arrangement in regard thereto, as the said financial agent shall make with the said trustee, the said Boston Safe Deposit and Trust Company.

483 Resolved, That each of the coupons — be attached, "to *be* bonds heretofore authorized to be issued," respectively on each bond shall be in the following form, viz:

$30. GRAND HAVEN, MICH., —— —, 1883.

Grand Haven water works promises to pay to bearer the sum of thirty dollars at the office of the Boston Safe Deposit and Trust Company, in the city of Boston, Mass., for six months' interest due on the fifteenth day of —— on bond No. —.

JAMES A. NORTON, *President.*

Resolved further, That all mortgages or deeds of trust shall provide for the relief of the trustee from its trust in case of its

desire to be so relieved, and the appointment of a successor in case of a vacancy in the office of trustee should exist, and such other regulations concerning the exercise of the powers of such trustee as the president of this corporation may deem best to insert in the said mortgage and as are not inconsistent with resolutions heretofore passed, and,

Resolved, further, That all the water rents to become due to this corporation from all persons and corporations other than the city of Grand Haven, or so much thereof as shall be necessary to make up any deficiency in the amount of interest which may at any time be due upon such bonds over and above the amount received by such trustee from such water rental, from the city of Grand Haven, or which may be over and above the amount of such interest, which said rental from the city of Grand Haven will pay, are hereby pledged to said trustee for the payment of the interest upon such indebtedness.

Resolved, further, That the date upon which said seventy
484 thousand ($70,000) dollars of bonds heretofore mentioned shall be issued and the date of the said mortgage or trust deed, securing the same shall be ——, A. D. 1883.

And, whereas, at a meeting of the stockholders of the Grand Haven water works, held at the office of George W. McBride, in the city of Grand Haven, Michigan, on the ninth day of November, 1883, all the stock being present and voting, it was

Resolved, That the stockholders do hereby endorse and approve the action of the board of directors of this corporation, in part and in whole, relating to the issuing of seventy thousand ($70,000) dollars in bonds secured by a mortgage upon all the property, rights, franchises and privileges of this corporation now owned, or that may be hereafter acquired by it, for the purpose of borrowing money as defined in resolutions upon pages forty-eight (48) forty-nine (49) fifty (50) fifty-one (51) fifty-two (52) fifty-nine (59) and sixty (60) of this record book, and they are empowered and authorized to determine all matters relating to form of bonds, mortgages or trust deeds, date of issue and execution of same, and all matters and details therein.

And, whereas, the said Grand Haven water works is a corporation organized under the provisions of chapter 128 of the Compiled Laws of the State of Michigan of the year 1871, as amended, entitled, "Companies for the introduction of water into towns, cities and villages," being chapter 84 of Howell's Annotated Statutes, and is authorized by law to issue bonds or other evidences of indebtedness, to borrow money and to execute mortgages or trust deeds, and the said Grand Haven water works has complied with the provisions of law in that behalf, so that it is empowered and authorized to borrow money, to issue the bonds mentioned in said resolutions
485 and hereinafter, to make this mortgage or deed of trust and is desirous of negotiating its bonds to the amount of seventy thousand ($70,000) dollars, and for the purpose of securing the payment thereof, desires to execute this mortgage or deed of trust to

the said Boston Safe Deposit and Trust Company, of Boston, Mass., as trustee for the holders of said bonds.

Now, therefore, this indenture, made this thirteenth day of November A. D. 1883, by and between the said Grand Haven water works, so being such corporation as aforesaid, of the first part, and the said Boston Safe Deposit and Trust Company, of Boston, Massachusetts, a corporation organized under the laws of the State of Massachusetts, as trustee for the holders of said bonds, of the second part: witnesseth:

That the said party of the first part, in consideration of the premises, and forasmuch as it has executed seventy (70) negotiable bonds, numbered consecutively from one (1) to seventy (70) inclusive, each of the denomination of one thousand ($1,000) dollars, due January 15th, (1904) ninteen hundred and four, bearing interest at the rate of six (6) per cent. per annum, payable semi-annually on the fifteenth days of July and January on the presentation and surrender of the coupons thereto annexed and hereinafter mentioned, as they respectively become due, both principal and interest payable in lawful money of the United States, at the office of the said Boston Safe Deposit and Trust Company, the said second party, each bond having forty (40) coupons attached thereto, numbered consecutively from one (1) to forty (40) inclusive, and each coupon being the promise of the first party to pay the semi-annual instalment of interest therein mentioned, and the said coupon number one (1) being
the promise of the first party to pay the interest therein men-
486 tioned July 15th, 1884, and each of the said bonds and coupons
being in the form set out herein, in the recital of the resolution of the board of directors of the first part hereto, and is desirous of selling and negotiating and selling the same, and of securing the payment thereof, for the purpose of so doing, hath granted, bargained, sold, remised, released, enfeoffed and confirmed, and by these presents doth grant, bargain, sell, remise, release, enfeoff, alien and confirm unto the said party of the second part, its successor or successors and assigns, all and singular that piece or parcel of land situate, lying and being in the city of Grand Haven, county of Ottawa, State of Michigan, and described as follows, to wit: A part of the southwest fraction of section (22) twenty-two, township eight (8) north of range sixteen (16) west, according to the United States survey, bounded as follows, that is to say, commencing at a point (330) three hundred and thirty feet east and (66) sixty-six feet north of an iron stake at the intersection of Beech Tree street and Washington avenue, running thence east at right angles with said Beech Tree street (330) three hundred and thirty feet, thence south parallel with said Beech Tree street, (132) one hundred and thirty-two feet thence west at right angles with said Beech Tree street, (330) three hundred and thirty feet, thence north (132) one hundred and thirty-two feet to the place of beginning, containing one acre of land, with all the buildings and appurtenances thereon and thereto belonging, together with all the wells, buildings, erections, machinery, pipes and works of whatsoever kind or description, now on said premises or hereafter to be placed thereon, and all and

singular the hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and also all and singular the works, pipes, mains, hydrants, stop gates, connections and plant of
487 said the party of the first part now in said city of Grand Haven in process of construction or hereafter to be constructed or acquired: and all the income, rents, issues and profits to be received therefrom and also all the lands, property and assets of said Grand Haven water works, of whatsoever kind and description, wherever situate, now owned by it, or hereafter to be acquired.

And all the franchises, rights and privileges of said first party now held and enjoyed by it or hereafter to be acquired, forever:

To have and to hold the above-described premises, property and assets, franchises, rights and privileges, to the said second party, its successor or successors and assigns forever: In trust, nevertheless, for the uses and purposes hereinafter mentioned.

And the said party of the first part, for itself, its successors and assigns, for a valuable consideration, the receipt whereof is herein and hereby confessed and acknowledged, doth covenant, grant, bargain and agree, to and with the said second party, that it is well seized of the above-granted franchises, rights and privileges, property and assets, of a good, sure and indefeasible title thereto: that the same are free and clear from all incumbrances and that the same in the quiet and peaceable enjoyment of the said party of the second part, its successors and assigns, the said party of the first part, its successors and assigns, against all and every person lawfully claiming or to claim the same or any part thereof, shall forever warrant and defend.

And for a further valuable consideration, to it in hand paid by said second party, receipt whereof is hereby confessed and acknowledged, the said party of the first part, for the further assurance of the said party of the second part, and the holders of such bonds, doth convey, grant, bargain and agree, with the said party of the second part,
488 its successors and assigns, that it will and its successors and assigns shall make, execute and deliver to said party of the second part, its successors and assigns, all such other and further conveyances, mortgages and instruments in writing as said party of the second part shall reasonably deem necessary to fully carry out the intent and meaning of this mortgage, and as will secure to the said party of the second part the water rents, incomes, issues and profits, hereafter and hereby intended to be conveyed, and especially upon request of the party of the second part, that it will, and its successors and assigns shall execute and cause to be recorded at its own expense, all such further mortgages or deeds to said second party of such property, rights, privileges and franchises, as it may acquire after the date hereof, and as may be necessary to supplement and make complete this mortgage, and to fully convey to said second party all the security for said bonds intended or meant by this mortgage to be conveyed, and as will enable said second party, its successors and assigns, in case it or they shall deem it necessary so to do, or in case of any default entitling it so to do, to sue for, collect and receipt for and water rents which may hereafter become due to this corporation

from any source whatsoever, or which may become due to its successors and assigns, and that such further mortgages or deeds of trust shall be in all respects as nearly as may be, like this mortgage and to be in confirmation of and supplemental to the lien of this mortgage on such hereafter acquired property intended to be conveyed by this mortgage.

Provided, always, and these presents are upon these express conditions, that if the said party of the first part shall and do well and truly pay or cause to be paid to the holders thereof all and singular the said seventy (70) bonds hereinbefore mentioned,
489 which shall be at any time outstanding and negotiated, principal and interest, at the several times therein mentioned for the payment thereof, according to the terms and provisions of said bonds severally and the coupons thereto respectively *thereto* attached, then these presents and the said bonds and the coupons thereunto belonging, shall cease and be null and void.

And it is hereby expressly agreed that should any default be made in the payment of said interest or any part thereof on any day whereon the same is made payable as above expressed, and should the same remain unpaid and in arrears for the space of (30) thirty days, then and from thenceforth, that is to say after the lapse of (30) days so much of the aforesaid principal sum of seventy thousand ($70,000) dollars as remains unpaid, with all arrearages of interest thereon, shall at the option of the said party of the second part, its successors and assigns, become and be due and payable immediately thereafter, although the period above and in said bonds limited for the payment thereof may not have expired, anything hereinbefore or in said bonds contained to the contrary thereof in anywise notwithstanding.

And it is also agreed, that at any time the said trustee, the second party hereto, its successors or assigns, shall deem the security for the payment of the debt evidenced by said bonds and coupons is impaired or in danger of being impaired, or that there is any reasonable probability that the next installment of interest on said indebtedness will not be fully paid, or if at any time any interest or any part of the interest on any part of said bonds shall be in arrears, it is hereby authorized and empowered to take, receive, sue for and collect the water rents thereafter to become due and payable to said first party, its successors or assigns, from the city of Grand Haven under the present contract between the said first party and said city of Grand Haven or any other further or future contracts be-
490 tween said first party, its successors and assigns, and the said city of Grand Haven, by first giving said first party and said city of Grand Haven five days' notice of its intention so to do; and in case such rental from the said city of Grand Haven shall not be sufficient fully for the purposes aforesaid, then the said second party, its successors and assigns, is hereby authorized, upon like notice as aforesaid, to said first party and to the person or persons owing such water rental, to take, receive, sue for, prosecute and collect all other water rents due or to become due to said first party its successors or assigns, from any other person or persons or corporations whom-

soever, and apply the same for the purposes aforesaid, or so much thereof as shall be necessary therefor.

And it is further agreed, that the said Boston Safe Deposit and Trust Company or any future trustee under this indenture, may assign and discharge itself or himself of the trusts herein created, by notice in writing to the party of the first part sixty (60) days before said resignation shall take effect, or by such shorter notice as the party of the first part may deem adequate and upon proper accounting in respect to its or his trusteeship and upon the execution of the conveyances hereinafter required.

And any vacancy in the office of any such trustee, however or whenever occurring, may be filled by appointment by the party of the first part, concurred in by a majority interest of the holders of bonds hereby secured, which appointment shall be in writing and be filed with the new trustee and the party of the first part.

And thereupon all the powers and authorities herein granted to or conferred upon the party of the second part and all the rights, interests and estates herein conveyed to said party of the second part,
491 and requisite to enable it to execute the purposes of these trusts, shall become vested in the new trustee appointed as above, without any further conveyance; but any trustee so resigning or vacating its or his office in any manner, shall execute such deeds of conveyance or other instruments as may be necessary to vest all its or his interest in said trust property in said new trustee upon the trust herein expressed.

And in case it may at any time hereafter prove impracticable to fill in manner as aforesaid any vacancy which may have occurred in said trust, the vacancy may be filled and a new trustee appointed by the circuit court for the county of Ottawa, in chancery, of the State of Michigan, upon application of any party interested, and after such notice as the court may order: such appointment by said court shall vest the mortgaged premises in the trustee so appointed as fully and with the same trusts and powers as if herein and hereby appointed. And as part of said decree of said appointment said court may direct any such conveyance by any outgoing trustee, as may be deemed necessary or convenient.

The party of the second part hereby accepts the trust aforesaid, and agrees faithfully to execute the same, but upon the following terms and conditions, which are mutually agreed upon by the parties interested herein, to wit:

That the reasonable charges and expenses of executing the trusts, including a reasonable compensation to the trustee, shall be paid by the party of the first part, or otherwise out of the trust estate on which they are hereby charged: and any trustee acting hereunder shall not be required to take measures for the enforcement of this mortgage or to sell the mortgaged premises under the power herein given unless further furnished with a reasonable amount of money for
492 these purposes and shall be indemnified against the loss, trouble and expense such trustee may be put to in so doing.

And that in the performance of the duties of the trust, the trustee shall be invested with full powers to submit to arbitration all ques-

tions of law or fact. And all controversies arising in the execution of the trusts. And to compromise and adjust the same on such terms as the trustee shall deem reasonable: and that any trustee hereunder shall be answerable only for gross negligence and wilful default, and shall not be responsible for any omissions or wrongful acts of any counsel, agents or attorneys employed by such trustee for any of the purposes aforesaid when selected in good faith.

But in case of the non-payment of the said bonds and the coupons thereon, as they respectively become due or any of the same or of the several sums of money evidenced thereby or any part thereof, principal or interest, at the time, in the manner and at the place above and in said bonds and coupons limited and specified for the payment thereof, then and in such case it shall and may be lawful for the said party of the second part, its successors and assigns, as such trustee as aforesaid, and the said party of the first part doth hereby empower and authorize the said party of the second part, its successors and assigns, as such trustee as aforesaid, to grant, bargain, sel-, release, and convey the rights, franchises, privileges, premises, assets and property, with the appurtenances hereby mortgaged, or intended or meant to be, at public auction or vendue and on such sale, to make and execute to the purchaser or purchasers, his, her, its or their heirs, successors and assigns forever, good, ample and sufficient deed or deeds of conveyance in law, pursuant to the statute in such case made and provided; and out of the
493 proceeds thereof to pay the holders of said bonds, if so much there shall be realized on said sale, principal and interest due upon said bonds, and the coupons thereto attached, after deducting the lawful costs and charges of such foreclosure and sale, rendering the surplus monies, if any there should be, to the said party of the first part, its successors and assigns.

In witness whereof the said Grand Haven water works has caused this mortgage to be executed by its president, who covenants that he has sufficient and lawful authority in that behalf.

{Seal of Grand Haven Water Works, Incorporated 1883, Grand Haven, Mich.}

And to be countersigned by its secretary and the common seal to be affixed hereto, at the city of Grand Haven, Ottawa county, State of Michigan, this 30th day of November, 1883.

JAMES A. NORTON, *President.*

T. A. TAYLOR, *Secretary.*

Countersigned in presence of—
WM. GATFIELD.
C. FERGUSON.

STATE OF MICHIGAN, } ss:
*County of Ottawa,* }

On this 14 day of February, A. D. 1884, before me, a notary public in and for said county, personally appeared James A. Norton and T. A. Taylor, known to me to be the president and secretary

respectively of the Grand Haven water works, and severally and respectively acknowledged that they had as president and secretary of said Grand Haven water works and as its act and deed executed the foregoing mortgage and affixed thereunto the com-
494 mon seal of said corporation, and that the foregoing mortgage was and is the free act and deed of said corporation.

[SEAL.] CHAS. T. PAGELSO,
*Notary Public, Ottawa Co., Mich.*

The Boston Safe Deposit and Trust Company, party of the second part to the foregoing indenture, has in witness thereof caused the same to be signed in its name and behalf, its corporate seal to be affixed to the same by its president, Frederick M. Stone, hereunto duly empowered, this thirtieth day of November, in the year eighteen hundred and eighty-three.

[Seal of the Boston Safe Deposit and Trust Co.]

BOSTON SAFE DEPOSIT AND TRUST CO.,
By FREDERICK M. STONE, *Pres't.*

In presence of—
BENJAMIN F. BROOKS.
HENRY G. NICHOLS.

COMMONWEALTH OF MASSACHUSETTS, *Suffolk*, } *ss:*

On this ninth day of February, A. D. 1884, before me, a notary public in and for said county, personally appeared Frederick M. Stone, known to me to be the president of the Boston Safe Deposit and Trust Company, and acknowledged that he had as president of said Boston Safe Deposit and Trust Company and as its act and deed executed the foregoing mortgage and affixed thereto the corporate seal of said corporation, and that the foregoing mortgage was and is the free act and deed of said corporation.

[SEAL.] HENRY G. NICHOLS,
*Notary Public.*

495 COMMONWEALTH OF MASSACHUSETTS, *Suffolk*, } *ss:*

CLERK'S OFFICE OF SUPERIOR COURT.

I, Jos. A. Willard, clerk of the superior court for said county, the same being a court of record, do hereby certify that Henry G. Nichols, Esq., whose name is subscribed to the proof or acknowledgment of the annexed instrument in writing, was at the time of taking such proof or acknowledgment a notary public in and for the said county, duly commissioned, sworn, and authorized to take the same; and, further, that I am well acquainted with his handwriting, and verily believe that the signature to said proof or acknowledgment is genuine; and, further, that the annexed instrument is executed and acknowledged according to the laws of said Commonwealth.

Witness my hand and seal of said court, at Boston, in said county and Commonwealth, this 11th day of February, A. D. eighteen hundred eighty-four.

[SEAL.] JOS. A. WILLARD, *Clerk.*

STATE OF MICHIGAN, } ss:
*County of Ottawa,* }

I, William F. Kelly, register of deeds in and for said county, do hereby certify that the annexed and foregoing is a true, correct, and compared copy of a mortgage recorded in Liber 26 of Mortgages, on page 186, &c., of the records of this office; that it is a correct transcript therefrom and of the whole of such original record.

Given under my hand and official seal, at the city of Grand Haven, this 18th day of September, A. D. 1888.

Seal of the Register of Deeds, Ottawa Co., Michigan.

WILLIAM F. KELLY,
*Register, Ottawa County, Michigan.*

(Here follow maps marked pp. 496 & 497.)

497*a* Supreme Court of the United States. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY, Appellant,
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. Holmes, The Grand Haven Water Works, Appellee-.

Case No. 113. October Term, 1892.

Whereas the complainant in the cause in the court below, for the purpose of proving the schedule of water rates established by the city of Grand Haven to be charged by the city for water supplied by it from its works, introduced in evidence for the same purpose a schedule of said rates of charges, marked "Complainant's Exhibit Number Five (5)," and also offered in evidence a copy of a newspaper called the Grand Haven Courier-Journal of the date of October 1st, 1887, in which said schedule of rates was published;

And whereas in printing the said record of said case on appeal in the Supreme Court of the United States a considerable unnecessary expense would be caused by printing in said record the whole of said newspaper:

Therefore it is stipulated by the respective parties in this cause that in the printing of said record for the use of said Supreme Court the clerk thereof shall omit and not print said newspaper in said record, but in the place and stead thereof shall print the said "Complainant's Exhibit Number Five (5)," which is as follows, vis:

"COMPLAINANT'S EXHIBIT No. 5."

"Copy of table of water rates charged by city water works, adopted by city of Grand Haven September 29th, 1887.

"*Schedule of Water Rates.*

| | |
|---|---|
| "Barber shops, first chair | $1 00 |
| "Each additional chair | 50 |
| "Bath tubs, public, first tub | 3 00 |
| "Public, second tub | 1 00 |
| "Private tub for family use | 1 00 |
| "Blacksmith shops, first fire | 2 00 |
| "Each additional fire | 1 00 |
| "Bakeries, one faucet | 3 00 |
| "Billiard halls, one faucet | 3 00 |
| "Butcher shops, one faucet | 3 00 |
| "Boarding-houses | special rates. |
| "Dwelling-houses, one faucet | 3 00 |
| "Dining-rooms and eating-houses, one faucet | 3 00 |
| 497*b* "All additional faucets | one dollar each. |
| "Hotels | special rates. |
| "Bar-rooms and saloons | 5 00 |
| "Livery stables | special rates. |
| "Laundries, one faucet | 5 00 |
| "Office or sleeping-room | 2 00 |
| "Private stables, including carriage washing, one horse or animal | 2 00 |
| "Each additional animal | 1 00 |
| "Stores, 22 ft. front or less | 2 00 |
| "Stores, 22 ft. front or less, where hose is used for washing windows or street-sprinkler (additional) | 3 00 |
| "Sprinkler (garden), with hose nozzle, 82 feet front or less | 8 00 |
| "Sprinklers or portable fountains, both running at the same time, 82 feet front or less, in addition to garden-sprinkler rates, each | 2 00 |
| "Soda fountains, where water is also taken in store | 3 00 |
| "Urinals, in hotels, saloons, or public, for bowl | 2 00 |
| "Private | 1 00 |
| "Water-closets, in hotel, saloons, or public, for bowl | 2 00 |
| "Private, for bowl | 1 00" |

And that it shall not be necessary to print any part of this stipulation except the said "Exhibit Number 5" herein contained, dated Nov. 5th, 1892.

NORRIS & NORRIS,
*Sol'rs for Defendant, The City of Grand Haven.*
LYMAN D. NORRIS, *Of Counsel.*
A. HOWELL,
*Sol'r for the Complainant, The Boston Safe Deposit & Trust Co.*

497c [Endorsed:] Case No. 13,671. Supreme Court U. S., October term, 1892. Term No., 113. The Boston Safe Deposit & Trust Co., app't, *vs.* The City of Grand Haven. Stipulation in regard to printing record.

[Stamped:] Office Supreme Court U. S. Filed Nov. 14, 1892. James H. McKenney, clerk.

498 & 499 *Water Rates. Rules and Regulations of the Grand Haven Water Works. Established A. D.* 1884, *Grand Haven, Mich.*

Rules and regulations of the Grand Haven water works.

*Rules and Regulations Respecting Plumbers and Plumbing.*

I.

Applications for water.

All applications for the introduction or supply of water into any premises, or for the extension of any pipe for the conveyance of such water, must be made by the owner, or authorized agent of the owner, of the premises, in writing on the books of the company, such application to state the uses to which it is to be applied, fully and without reserve or concealment.

No permit granted except to property-owners.

No permit will be granted except to the property-owner, who shall be responsible for the payment of all rates and for the use of the water in compliance with the established rules and regulations of the company.

II.

Plumbers.

The introduction of service pipe for the supply of premises with water and all plumbing of every description for the use or distribution thereof, must be done by plumbers licensed by the company, and who shall be under bonds to the company for the faithful performance of their work in accordance with the rules and regulations of the company.

Penalty.

For any violation of this rule a penalty of ten dollars will be incurred, and the use of water will not be allowed on the premises until the same is paid.

III.

Service pipe.

Either lead or galvanized iron service pipes may be used, at the option of the applicant. When lead is used, it must be that designated as "extra strong."

All service pipe must be laid at least five and a half to six feet below the surface of the ground, to be laid and kept in good repair and protected from frost by and at the expense of the applicant.

All connection with the street mains will be made by the company, who will lay the service pipe to the curb and put in there its regulation service cock. Such connection and service cock will be regarded as a part of the main pipe, and will belong to the company. Service cock.

Where more than one building or tenant is supplied through one service pipe, the application for the supply of such buildings or tenants shall be made by one person, and said person shall be held responsible for all supplies through said service pipe.

IV.

Ample notice must be left at the office of the company before any service is to be put in, stating the street and number of the location, and the name of the person owning the premises, and a like notice of at least twenty-four hours must be left when water is to be turned onto any premises. Notice when connection to be made or water turned on.

V.

Where water is introduced into any building a stop and waste cock must be placed directly inside the building, so that the water may be shut off from the whole building without closing the service cock. Stop cock inside building.

VI.

None but self-closing water-closets and urinals shall be used, unless by special permit, or where meters are used. Water-closets.

VII.

No addition or alteration whatever, in or above public or private pipes, shall be made by any person, until application thereof has been made by the property-owner or his authorized agent, on the books of the company, and a written permit given by the superintendent. Additions and alterations.

For any violation of this rule, a penalty of twenty dollars will be incurred, and the flow of water will be stopped until the same is paid. Penalty.

VIII.

All apparatus for the use of water shall be subject to the inspection and approval of the com-

Inspection of apparatus and turning on water.

pany as to pattern, material and workmanship; and no person, except the authorized agent of the company, shall turn the water on any plumbing, whether a new or old supply, under a penalty of twenty dollars.

Penalty.

Except that it may be turned on by the plumber to test the work, to be turned off immediately after the test is made.

Building rates must be paid before water will be turned on.

Water will not be turned on for any building until the water used for building purposes (if any has been used) has been paid for.

*Rules and Regulations Respecting the Use of Water.*

I.

Landlords to supply tenants with copy of rules.

Property-owners leasing premises are requested to furnish their tenants with a copy of these rules and regulations, which will be supplied upon application at the office of the company.

II.

Must not supply other persons.

No owner or tenant of any premises supplied with water by the works will be allowed to supply water to other persons or families; if found so doing the supply will be stopped and the amount paid forfeited; and, except where special permission is granted by the company, each consumer must be supplied by independent service pipe from the main.

Must have independent service except by permission.

Where two or more are supplied by one service.

In case two or more parties are supplied with water from the same service pipe, if either of said parties fail to pay the water rates when due, or to comply with any rule of the company, the company may turn off the water from such pipe until the rent is paid and the rule strictly complied with.

III.

Street-sprinklers and waste of water.

Street sprinklers or washers must not be used to sprinkle beyond the centre of the street, or the limits of the premises of those paying for them; and must not be permitted to run to waste or leak, or be converted into jets, or be used for washing down the collections of gutters upon neighboring premises, or used to flood the streets, but merely to sprinkle them; taps at sinks, wash-basins, water-closets, baths, urinals, etc., must be kept closed when not in actual use, and must not be allowed to leak.

IV.

Fountains.

No yard fountain or jet shall be used longer than six hours a day for five months in a year, without a special arrangement, and the application shall state at what hours it shall be used, and if found running at any other time, the water may be shut off from the premises, and double rate charged for the fountain.

V.

Takers to keep apparatus in repair and prevent unnecessary waste.

All persons taking water shall keep their own service pipe, stop-cocks and apparatus in good repair and protected from frost at their own expense, and shall prevent any unnecessary waste of water; and it is expressly stipulated by the Grand Haven water works, that no claim shall be made against it or the city by reason of the breakage of any service cock or service pipe.

VI.

Leaks to be promptly repaired.

All leaks in service pipes in the street, and in and upon all premises supplied, must be promptly repaired by the owner or occupant, and on failure to make such repairs with reasonable dispatch, the company will turn off the water from the premises until necessary repairs are made, and charge one dollar for turning on again.

VII.

Willful waste of water.

Penalty.

Any willful waste of water, or waste through neglect of servants or agents, or by fixtures out of order, or by allowing water to be taken from premises by persons having no right to its use, will be a sufficient cause for stopping without notice the supply to any premises, and forfeiture of amount of bill paid in advance, or the withholding the supply for such time as the company may decide.

Vacating premises.

Consumers vacating their premises must give notice at the office of the company, that the water may be shut off, and they will be held responsible for the water rate until such notice is given.

Transfer of balance of rates paid.

Where there is a change of occupants the balance of a bill paid in advance may be transferred, on notice at the time, to other premises for the same uses; or balance allowed to apply upon next bill.

IX.

Payment of bills.

All water bills shall be paid at the office of company, and, except for measured water, in advance.

Time of payment.

All bills shall be paid semi-annually, the first days of April and October; where the street-sprinkler, yard and garden hydrants, and fountains are used, and water is not taken for other purposes, the rate shall be paid annually, on the first day of April.

Annual rates.

Shutting for default.

Where bills are not paid by the tenth day of the month on which they fall due, the company at its option may shut off the water from the premises without notice.

Fractional periods.

All bills for fractions of regular terms shall be payable in advance for the balance of the term, but no fractional terms shall be allowed street-sprinklers, yard and garden hydrants, and fountains when used alone.

Security in case of measured water.

Where measured water is supplied, the company will, if it deems advisable, require a payment or a deposit in advance, or such other security as may by it be deemed sufficient to insure the full payment of the bills when due.

X.

Claims for deductions.

If any deduction is claimed from any quarterly or half-yearly bill, the claim must be made at the office of the company, before the tenth day of the next quarter or half year, and the company reserves the right to decide as to whether any deduction shall be made in any case.

XI.

Inspection of premises.

The superintendent personally, or any person delegated by the company for the purpose, must, at all reasonable hours, have free access to all parts of the premises to which water is delivered, for the purpose of inspection, examination of fixtures, etc.; and all persons using water must, at all times, frankly and without concealment, answer all questions put to them relating to its consumption.

XII.

Fraudulent representation, uses, waste, etc.

In case of fraudulent representation on the part of the applicant, or of use of water not embraced in the application, or of willful or unreasonable waste of water, or violation of any of the rules and regulations of the company, or non-payment

of rates when due, the company in addition to any penalties hereinbefore imposed, reserves the right to forfeit any payments that have been made, and cut off the supply of water without notice, and the water will not be turned on again unless upon satisfactory assurance that no further cause or complaint shall arise, and the payment of such penalty as the company may impose.

XIII.

Charge for turning on water.

Whenever the water is turned off for any cause, a charge of one dollar, payable in advance, will be made for turning it on again.

XIV.

Changing rules and rates.

The company reserves the right to change the rules and regulations and the rates for the use of water from time to time; to make special rates on contracts in all proper cases; to shut off the water for alterations, extensions and repairs, and to stop and extract the supply of water whenever it may be found necessary; and the company shall not be liable under any circumstances for a deficiency or failure in the supply of water whether occasioned by shutting off water to make repairs, or connections, or of any cause whatsoever.

Deficient supply.

XV.

Full rates charged for all plumbing on premises supplied.

Full rates will be charged for all the plumbing in houses, whether supplied with tanks for using rain water or not.

XVI.

Permits not given to builders in arrears.

No permit will be given for the use of water for building purposes where the builder is in arrears for former supply.

*Tariff of Water Rates per Annum.*

| | |
|---|---|
| Air pumps | $12 00 |
| Bakeries, average daily use for each barrel of flour | 3 50 |
| Banks, including one wash-basin | 10 00 |
| Barber shops, one chair | 5 00 |
| Barber shops, each additional chair | 3 00 |
| Bath-house, per tub, public | 10 00 to 15 00 |
| Bath-rooms, private, per tub | 4 00 |
| Bath-rooms, each additional tub | 2 00 |
| Billiard-room | 5 00 |
| Blacksmith shop, one fire | 3 00 |

| | | |
|---|---|---|
| Blacksmith shop, each additional fire | | 1 50 |
| Book-binding | 10 00 to | 15 00 |
| Breweries, distilleries, etc., special rate. | | |
| Butcher's shop | 4 00 to | 8 00 |
| Dwelling-houses, not exceeding four rooms | | 5 00 |
| Maximum dwelling rate | | 10 00 |
| Each additional room | | 1 00 |
| Dyeing and scouring, including laundries | 10 00 to | 40 00 |
| Eating saloons | 10 00 to | 30 00 |
| Fountains flowing not exceeding six hours per day: | | |
| During the season, $\frac{1}{8}$-in. orifice | | 5 00 |
| " " " $\frac{3}{16}$-in. orifice | | 12 00 |
| " " " $\frac{1}{4}$-in. orifice | | 25 00 |
| " " " $\frac{5}{16}$-in. orifice | | 45 00 |
| Hotel and boarding-houses, per room, special rate. | | |
| Hose for street sprinkling, including washing and sprinkling sidewalks, 50 ft. or less | | 5 00 |
| Each additional foot | | 10 |
| Hose for sprinkling lawns, per 1,000 square feet or less, and not over 3,000 feet | | 6 00 |
| Hose for sprinkling lawns, 3,000 feet and not over 5,000 feet | | 10 00 |
| Hose for sprinkling lawns, 5,000 feet and not over 10,000 feet | | 12 00 |
| Livery and other public stables, including washing carriages, meter rate. | | |
| Making mortar, per perch of 16½ cubic feet | | 05 |
| Offices and sleeping-rooms, including wash-basin | 3 00 to | 10 00 |
| Photograph gallery | 10 00 to | 30 00 |
| Plastering, per bu. lime | | 03 |
| Printing offices, special rate. | | |
| Public halls | 5 00 to | 20 00 |
| Private stables, including washing carriages, 1 horse | | 3 00 |
| Private stables, including washing carriages, 2 horses | | 5 00 |
| Each additional horse | | 1 00 |
| Cows | | 1 50 |
| Saloons | 10 00 to | 30 00 |
| Steam boiler, nominal horse power of ten hours' run to ten h. p. | 5 00 per h. p. | |
| From ten to twenty h. p. | 4 00 per h. p. | |
| Above twenty h. p. | 3 00 per h. p. | |
| Steam boiler for house-warming, etc., each square foot surface (no license less than $5.00) | | 30 |
| Stores | 8 00 to | 15 00 |
| Tempering mortar and wetting brick, per kiln, count per M | | 10 |
| Urinals, public | 10 00 to | 30 00 |
| Urinals, private | | 3 00 |
| Water-closets in public houses, per bowl | | 8 00 |
| Water-closets in private houses, per bowl | | 5 00 |
| Each additional bowl | | 3 00 |

Rents for all purposes not herein named will be fixed by estimation or meter measurement at the option of the water works.

*Meter Rates.*

100 to 1,000 gallons per day, at the rate of 30 cents per 1,000 gallons.

1,000 to 2,000 gallons per day, at the rate of 25 cents per 1,000 gallons.

2,000 to 4,000 gallons per day, at the rate of 20 cents per 1,000 gallons.

Over 4,000 gallons per day, at the rate of 15 cents per 1,000 gallons.

Minimum rate per year, $10.00.

*Special Rates.*

For purposes not herein named special rates will be made.

*Terms of Payment.*

Water rent in all cases *are* payable semi-annually, in advance, on the 1st of April and October of each year.

*Reserved Rights.*

The right is reserved to stop the use of water for manufacturing purposes, except for steam boilers, when the public interest may require.

*Fires.*

The use of water for street or lawn sprinkling or in large quantities during a fire, after the alarm is given, is strictly forbidden except supply to steam boilers. For a violation of this rule the water will be turned off without notice.

*Rates on Yard, Lawn, and Garden Hydrants.*

Street-washers, fountains, and hand hose are for use from April 1st to October 1st. For longer use additional rates in advance will be collected.

The right is *ob*served to turn off water from hydrants, street-washers, fountains, &c., whenever repairs are necessary, and no reduction will be allowed.

*Extra Rates.*

For any purposes before named, the right is reserved to apply extra rates for more than the ordinary and average use of water or measure water by meter. A reasonable interest on cost of meter and setting will be added.

The use of water for sprinkling and other purposes beyond your own frontage and to the center of the street is strictly prohibited.

No water shall be supplied by any water-taker to persons not entitled to its use.

The superintendent must be permitted to enter the premises of any water-taker to examine the pipes and fixtures and quantity of water used and the manner of its use.

500 UNITED STATES OF AMERICA:

In the Circuit Court of the United States for the Sixth Circuit and Western District of Michigan, Southern Division. In Equity.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY
*vs.*
THE CITY OF GRAND HAVEN, ALVAH L. JONES, and THE GRAND HAVEN WATER WORKS.

Stipulated in this cause by the respective parties that if an appeal to the Supreme Court of the United States be perfected by the complainants the clerk may return the original of "Exhibit No. 8, C. H. B." (being No. 620 of the Grand Haven Courier Journal), also "Exhibit No 6, C. H. B.," being water rates, rules, and regulations of the Grand Haven water works, in place of a true copy of such originals, and that on the hearing of this cause and the printing of the record thereof the clerk of the Supreme Court of the United States need *not* print of Exhibit No. 8 aforesaid only such portion of the proceedings of the common council of the city of Grand Haven as recites and establishes water rates for the use of the water furnished by the city from its own system of water works.

Dated August 28th, A. D. 1889.

A. HOWELL & W. A. UNDERWOOD,
*Sol'rs for Compl't.*

NORRIS & NORRIS,
*Solicitors for City of Grand Haven.*

[Endorsed:] No. 918. U. S. circuit court, west. dist. Mich., southern divis. Boston Safe Deposit & Trust Co. *vs.* City Grand Haven *et al.* Stipulation. Filed Aug. 31, 1889. C. L. Fitch, clerk.

501 STATE OF MICHIGAN, } *ss*:
*Wayne County,* }

Joseph C. Hart, of the city of Detroit, in said county, says that he is one of the sureties in the annexed bond of the Boston Safe Deposit and Trust Company, and that he is worth not less than the sum of two thousand dollars in unencumbered real estate in this State over and above all debts, liabilities, and exemptions from execution; and further says —.

JOSEPH C. HART.

Subscribed and sworn to before me this 9th day of Sept., 1889.

CHARLES K. LATHAM,
*Notary Public, Wayne Co., Mich.*

STATE OF MICHIGAN, } ss:
*Wayne County,* }

—— ——, of the city of Detroit, in said county, says that he is one of the sureties in the annexed bond of the Boston Safe Deposit and Trust Company, and that he is worth the sum of — dollars and upwards in unencumbered real estate owned by him in this State over and above all just debts and liabilities and exemptions from execution; and further says not.

—— ——.

Subscribed and sworn to before me this — day of September, 1889.

—— ——.

Know all men by these presents, that we, Boston Safe Deposit and Trust Company, a corporation organized and existing under the laws of the State of Massachusetts and having its principal office in the city of Boston in said State of Massachusetts, as principal, and Joseph C. Hart and James F. Joy, both of the city of Detroit, in the county of Wayne and State of Michigan, as sureties, are held
502 and firmly bound unto the city of Grand Haven, a municipal corporation existing under the laws of the State of Michigan, Alvah L. Holmes and Grand Haven water works, a corporation organized and existing under the laws of the State of Michigan, in the full and just sum of three hundred dollars, lawful money of the United States of America; to be paid to the said The City of Grand Haven, Alvah L. Holmes, and Grand Haven water works, or to their certain attorney, executors, administrators, successors, or assigns; to which payment, well and truly to be made, we do bind ourselves, our successors, heirs, executors, and administrators, and each and every of them, firmly by these presents.

Sealed with our seals. Dated the fourth day of September one thousand eight hundred and eighty-nine.

Whereas, lately, at a session of the circuit court of the United States for the sixth circuit and western district of Michigan, southern division, in equity, in a suit depending in said court between said Boston Safe Deposit and Trust Company, as complainant, and said The City of Grand Haven, Alvah L. Holmes, and The Grand Haven Water Works, as defendants, a final decree was rendered in said cause, against the said complainant, on or about 22nd day of May, A. D. 1889, dismissing its bill of complaint in said cause with costs; and whereas the said Boston Safe Deposit and Trust Company has appealed from said decree to the Supreme Court of the United States to be holden at Washington on the second Monday of October, next:

Now, therefore, the condition of the above obligation is such that if the said Boston Safe Deposit and Trust Company shall prosecute its appeal to effect and if it fail to make its plea good shall pay

and answer all costs, then the above obligation to be void;
503 otherwise to remain in full force and virtue.

[Seal of Boston Safe Deposit and Trust Company.]

BOSTON SAFE DEPOSIT & TRUST CO.,
By F. M. STONE, *President.*
JOSEPH C. HART. [SEAL.]
JAMES F. JOY. [SEAL.]

A. HOWELL,
Witness to signature of Jos. C. Hart.
ALFRED RUSSELL,
Witness to signature of James F. Joy.

The foregoing bond is hereby approved in form and substance, including the sufficiency of the sureties.
Dated September 11th, A. D. 1889.

H. F. SEVERENS,
*District Judge.*

[Endorsed:] No. 918. The circuit court of the United States for the western district of Michigan, southern division. In equity. Boston Safe Deposit and Trust Company *vs.* City of Grand Haven *et al.* Bond on appeal. Filed Sep. 13, 1889. C. L. Fitch, clerk.

504 UNITED STATES OF AMERICA, } *ss:*
*Western District of Michigan, Southern Division,* }

I, Charles L. Fitch, clerk of the circuit court of the United States for the western district of Michigan, do hereby certify that the foregoing is a true and compared copy of the files and records and the whole thereof in the proceedings of said court in said entitled cause.
Witness my official signature and the seal of said court, at Grand Rapids, this 13th day of September, in the year of our Lord one thousand eight hundred and eighty-nine.

CHARLES L. FITCH, *Clerk.*
—— ——, *Deputy.*

{Seal of the U. S. Circuit Court, Western District of Michigan, Southern Division.}

Endorsed on cover: Case No. 13,671. W. Michigan C. C. U. S. No. 113. The Boston Safe Deposit and Trust Company, appellant, *vs.* The City of Grand Haven, Alvah L. Holmes, and The Grand Haven Water Works. Filed October 1, 1889.

Office Supreme Court U. S.
FILED.
JAN 11 1893
JAMES H. McKENNEY,
CLERK.

# APPELLEE'S BRIEF, CASE No. 13,671.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1892.

TERM No. 113.

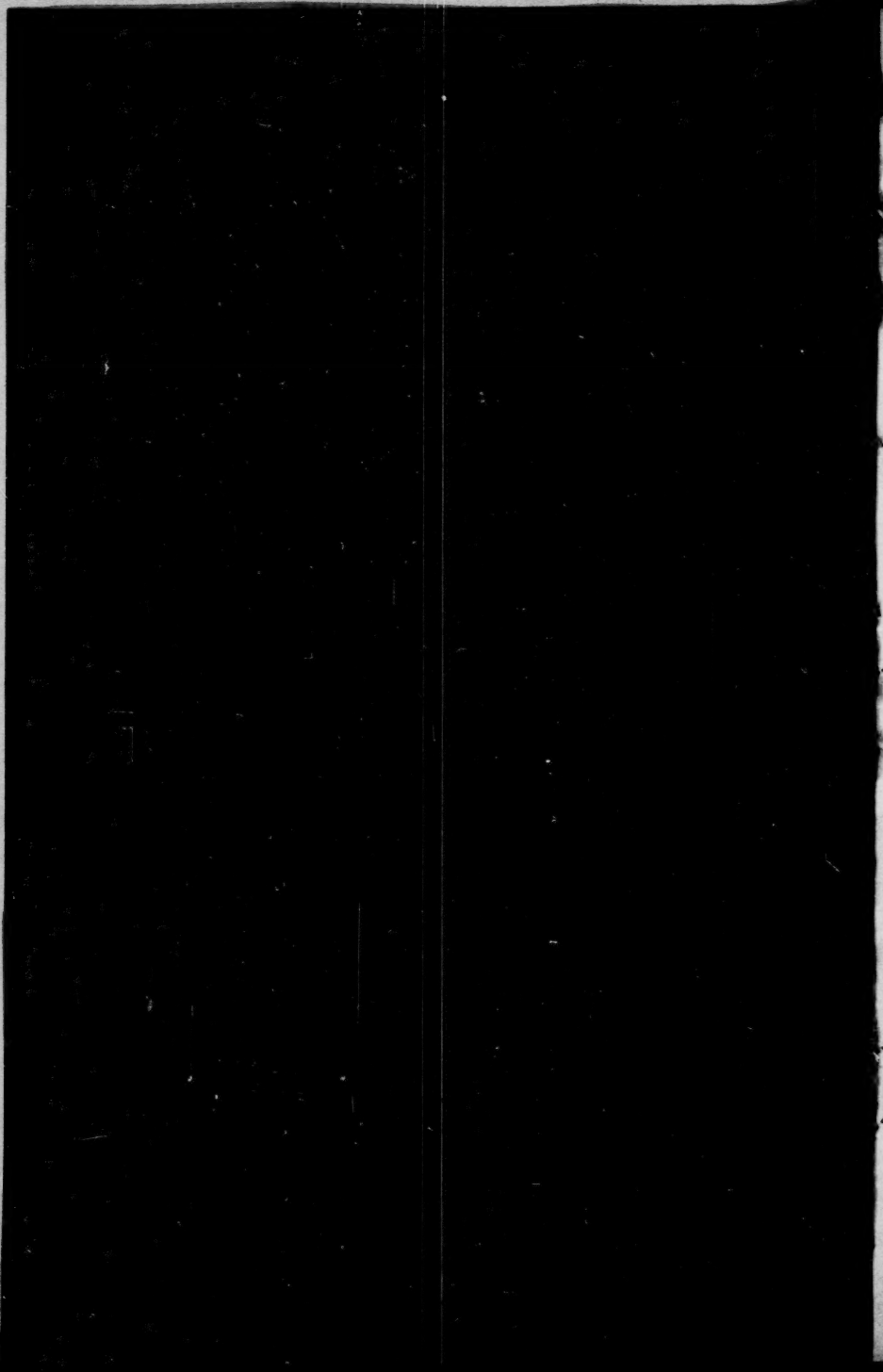
THE BOSTON SAFE DEPOSIT AND TRUST COMPANY,
APPELLANT,

*vs.*

THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, AND THE GRAND HAVEN WATER WORKS,
APPELLEES.

LYMAN D. NORRIS,
MARK NORRIS,
Counsel for City of Grand Haven.

West Michigan Printing Co., Grand Rapids, Mich.



# THE UNITED STATES OF AMERICA

## THE SUPREME COURT OF THE UNITED STATES.

THE BOSTON SAFE DEPOSIT AND TRUST COMPANY,
Complainant and Appellant.
vs.
THE CITY OF GRAND HAVEN, ALVAH L. HOLMES, AND THE GRAND HAVEN WATER WORKS,
Defendants and Appellees.

No. 113.
October Term, 1892.

## BRIEF FOR DEFENDANT, CITY OF GRAND HAVEN.

I.

The sole object of this Bill is, to enjoin the City of Grand Haven from damaging and impairing the complainant's mortgage security, by enjoining said city and its servant Holmes, from extending, completing and operating its municipal water works. (R. 13.) The other defendants are nominal. Holmes has no interest in the matter, and the Grand Haven water works is, to all intents and purposes, on the same side with the complainant.

II.

The grounds on which this relief is asked are as follows. (See Bill.)

1. That defendant City, by determining to discontinue the use of the City's water works as a means of supplying the said city with water, and to abandon that means of supplying and furnishing water in the city (Bill, paragraph 5, R. 39), and by making a contract with

defendant water works for a supply of water (Bill, paragraph 7, R. 3), and by passing a resolution (R. 15 "A"), declaring it inexpedient to construct water works for itself, "induced the said water works company to invest and expend its funds and means in the construction and building of its said works * * * and thereby gave it to understand and believe and to be assured and led and induced it to construct said works, upon the understanding, belief and assurance that so long as it was able, ready and willing to furnish said city and inhabitants with an adequate supply of water * * * that said city would not impair or destroy the value of its said works by constructing and maintaining other water works for itself for the supplying of water in said city, and thereby led and induced the holders of said bonds, to purchase and invest their money therein, upon the security of said mortgage." (Bill, paragraph 15; R. 9, 39.)

2. That by the resolution and contract aforesaid, the defendant city "virtually and in effect promised and agreed to and with the said water works company, that in consideration of its constructing said water works and furnishing and supplying said city and the inhabitants thereof with water: * * * That it, the said water works company, should * * * have and enjoy the right and privilege of furnishing and supplying water from its works to the said city and the inhabitants thereof, and the benefits thereof, and that * * * the said city would not build nor construct water works in said city or itself supply said city and the inhabitants thereof with water." And it avers violation of this agreement and damage to the water works thereby, and consequent loss to the bond holders. (R. 9, Par. 16.)

3. And the Bill charges that by inducing the water works company to build, as charged in the Bill Par. 15, (R. 9), the City is estopped from building its own water works during the life of its contract with the company, so long as the company fullfils the contract on its part.

4. And the bill further charges in effect that the City had two ways of obtaining a water supply:

(1). By building its own works, and

(2). By contracting with Grand Haven Water Works.

And that by adopting the latter method, it has elected its course and has no power to change the same, nor to obtain water except from the Grand Haven Water Works. (Bill Par. 20, R. 11).

We have, then, two grounds upon which relief is asked;

1st. That the City is estopped from extending and operating its own works.

(a). By its contract with the water works.

(b). By election.

2nd. That is has in law contracted with the Grand Haven Water Works not to build works of its own.

The Court will here note that no contract nor any dealings by defendant city with complainant is averred. None is proved. Any rights complainant may have against the city spring from the fact that the complainant is the mortgagee of the defendant, Grand Haven Water Works' Plant, franchises, rents, income and profits, and therefore, in equity, assignee of the contract between the city and the water works. (R. 230-3).

## III.

The defence consists:

(a). In a denial of the estoppel, and contract averred.

Ans. Pars. 5 and 10. R. 46-47.

(b). In an averment that the defendant city is a public municipal corporation of limited powers, of which limitation, complainant and all others had notice; that the contract, exhibit B to the bill, (R. 15-19) under which complainant claims was and is ultra vires and void.

Ans. Par. 7, R. 46-7.

(c). In a denial that Grand Haven Water Works has performed its agreements under said contract exhibit B, and an averment that it failed to do so, and that therefore defendant rescinded it.

Ans. Par. 8, R. 47; Par. 14, R. 55.

(d). In a denial of any damage to complainant by its action in building water works, i. e., *damnum absque injuria*.

Ans. Par. 11, "A" R. 48.

(e). In the denial of the acceptance of the water works by the defendant city; a denial of the use of its water and a denial of any acknowledgment of the contract.

Ans. Par. 15, R. 56.

(f). General demurrer.

Ans. Par. 16, R. 56.

## IV. FACTS.

April 12, 1883, the defendant city then having a small water works system of its own, its common council passed a resolution declaring it expedient to have water works in said city, but that it was inexpedient for the city to build them. (R. 87.)

By statute, printed as an appendix to this brief, this resolution is a condition precedent to the organization of a Water Works Company.

> 1 How. Stat. Sec. 3110.
> Atty. Gen. vs. Hanchett; 42 Mich., 436.

This resolution was not passed for the benefit of the parties who afterwards organized the Grand Haven Water Works, but for the benefit of other parties. (R. 148, f. 244-5).

September 25, 1883, The S. L. Wiley Construction Company proposed to the City of Grand Haven to form a corporation, build water works, and supply the city with water *for $4,200 per annum for twenty-five years, or $105,000 and the grant of a franchise.* (R. 87, 16-46).

October 18, 1883, The Grand Haven Water Works was organized. (R. 290).

November 8, 1883, the city contracted with said water works in accordance with the proposition of The S. L. Wiley Construction Company. (R. 15, 46.)

By this contract, the water works system was to be completed by July 1st, 1884. (R. 15): They were not then completed. (R. 4, 8). The water works company asked and received an extension of two

months. (R. 88). The works were not completed in that time. (R. 4, 8). They were not completed until November, 1884. (R. 4, 90).

September 4, 1884, the Common Council of the defendant city passed a resolution rescinding the contract with the water works because of the non-completion of the works at the time agreed, and as extended. (R. 89).

November 6, 1884, the city was notified that the works were completed, and that rental would be charged from that date. (R. 90).

Between September 4, 1884, and January 29, 1885, there were divers communications between said city and the water works. (R. 89-94). The city declined to recognize any liability on the contract or pay any bills for hydrant rental.

By one of the provisions of the contract between the city and the water works, the water works were required to have sufficient pressure to throw six one-inch streams one hundred feet high simultaneously. (R. 7).

January 15, 1885, the water works tested their system, and it wholly failed to meet the test. (R. 92, 156.) Even the complainant's witnesses admit that the water was not thrown to exceed eighty feet high. Others put it from sixty to seventy feet. (R. 257, 277.) This test has not been complied with at any time since.

January 17, 1885, at the request of the water works, the City specified its objections to the system. (R. 92.)

January 18. 1885, occurred the first fire since the claimed completion of the work, (R. 157-8), and the Grand Haven firemen used water from the water works to put out the same. (R. 157-8.) At the next meeting of the City Council, the fire department was instructed not to use water from the water works (R. 93), which objection was repeated in stronger language April 16, 1885, (R. 93). The fire department had notice of these resolutions, (R. 256). Notwithstanding which, the fire department for about two years continued to use the water works water to put out fires. (R. 256).

From the presentation of the first bill of the Water Works Company, December 26, 1884, down to date, the city has always refused to pay any water rental under the contract. No suit has ever been brought against the City for water rental or the value of the water used—either by complainant or the water works. Neither has complainant, although the Water Works' bonds are in default for two years' interest (R. 115), ever taken possession, or sought to foreclose its mortgage.

In the summer of 1887, the City of Grand Haven determined to extend and enlarge its water works, which it had when its contract with the defendant water works was made, and which it had continued to operate from that time to the present. In pursuance of this determination, the City contracted with the defendant Holmes, for the enlargement aforesaid. Holmes entered on his work and completed it. Complainant filed this Bill during the progress of Holmes' work, in November, 1887. A preliminary injunction was asked and refused. Holmes' work was completed and the City is now running its extension as well as its old works.

## V ARGUMENT.

### A.

Had the Court below jurisdiction?

The learned Judge who heard this case was of the opinion that this was a suit to recover the contents of a chose in action in favor of the assignee, in a case where the assignor could not have sued in the U. S. Court, and that the Court had not jurisdiction.

Sere vs. Pitot, 6 Cranch 335.
Deshler vs. Dodge, 16 How. 622-631.
Bushnell vs. Kennedy, 9 Wallace 387.
Shoecraft vs. Trustees of Florida, 124 U. S. 730.
Corbin vs. Blackhawk, 105 U. S. 665.
Ambler vs. Eppinger, 137 U. S. 480-3.
Barney vs. Bank, 5 Blatchford, 115.
Parker vs. Ormsby, 141 U. S. 81.

### B.

Has complainant any standing in Court?

The only damage alleged or proved, is caused by the City's competition with the Water Works.

This is damage to the Water Works' franchise only, and is claimed by the City to be *dammun absque injuria.*

The complainant claims to be mortgagee of the Water Works *franchise.* (R. 231).

The Water Works has no authority to mortgage its franchise.

How Stat. § 3127.

Without such authority it cannot do so.

Branch vs. Jessup, 106 U. S. 484.
Pullan vs. C. & C. R. R. Co., 4 Biss 41.

Where a corporation has granted to it a franchise intended in a large measure to be exercised for the public good, the due performance of those functions being the consideration for the public grant it cannot without the consent of the State contract to convey those rights to others.

Thomas vs. R. R. Co., 101 U. S. 83.
Tel. Co. vs. U. P. R., 1 McCrary 183.

If complainant has no rights in the Water Works franchises it cannot sue for damage thereto.

### C.

The Circuit Judge below dismissed the Bill for want of jurisdiction.

If he erred, it is still an open question here whether the Bill was not rightly dismissed on the merits.

Let us consider the defense on the merits.

D.

The contract between the defendant City and the Grand Haven Water Works, of date November 8th, 1883, under which the complainant claims a monopoly, is void. The Constitution of Michigan provides: "The Legislature shall provide for the incorporation and organization of cities, and shall restrict their powers of taxation and contracting debts."

Art. XV. § 13.

The Charter of Grand Haven, a public Act, was passed in 1867, (Session Laws of 1867, p. 467). It has since been amended several times. At the time of the making of the above contract, its Charter, Section 34 provided:—"No bond, note or other obligation or evidence of indebtedness of said corporation, shall be given or issued by said corporation, except as provided in sections 80 and 81, of this act, or by any officer thereof in his official capacity, whereby the said city shall become obligated to pay any sum of money."

Sections 80 and 81 provide as follows:—

Sec. 80. "Whenever the common council shall deem it necessary to issue bonds of the city for any purpose, they shall call a meeting of the property-holding tax-payers of the city, being electors thereof, by posting notices in five of the most conspicuous places in said city, at least ten days previous to the time of such meeting, also specifying the amount and object for which it is proposed to issue said bonds; the Mayor, or in his absence, the recorder, shall preside at such meeting: and the electors present shall chose viva voce, any of their number to be the inspectors and clerks of said election, who shall, before proceeding to the discharge of their duties, make oath or affirmation faithfully to discharge the duties of their respective offices at such election, which oath or affirmation may be administered by any person authorized to administer oaths; said election shall be conducted in the same manner, and the canvass of votes, as near as may be, as other elections under this act. At the close of such election, the inspectors shall make two certificates of the number of votes given for and against such issue of bonds, one of which shall be forthwith deposited with the Recorder of said city, and the other filed in the office of the County Clerk for the County of Ottawa: Provided, that not more than two of such meetings shall be called in any one year."

Sec. 81. "Whenever the Common Council shall be authorized by vote of the tax-payers, as aforesaid, they may issue the bonds for the said city for the amount aforesaid, and provide for the payment of the interest thereon; and for this purpose shall annually levy, assess and collect on the aforesaid value of all the real and personal estate in said city, made taxable by the laws of this state, taxes for the purpose, not to exceed in amount a sufficient sum to pay the interest accrued or to accrue on said bonds and for the year for which said taxes are levied."

There is nothing alleged or proved to show that the provisions in Sections 80 and 81 were carried out, and that the electors of the City of Grand Haven voted to bind themselves beyond the ordinary

charter powers in the common council. On the contrary it appears that no such vote was ever had.

The contract was therefore unauthorized as it obligated the city to pay $105,000.

Niles Water Works vs. City of Niles; 59 Mich., 311.
Putnam vs. Grand Rapids; 58 Mich., 417.

In the last case, the charter of the city of Grand Rapids provided: —"It shall not be lawful for the common council * * to borrow money or authorize the creation of any liability or indebtedness against said city in any one year, exceeding in the aggregate the amount by which this act may be raised by tax for such year. * *

The City contracted for lights for five years at $26,000 per annum. which amount, added to the other appropriations for the year, exceeded the tax levy for the year. It was held that this contract was *ultra vires.*

In the second case, Niles Water Works vs. City of Niles. The Charter of Niles prohibited the Common Council from contracting debts or incurring liabilities in any one year exceeding the revenue for that year. The taxation was limited to one and one-half per cent on the assessed value. The Council contracted with the plaintiff for water for thirty years at $2,500 per annum. Total $75,000. The Court held the contract void, and said, "there can be no doubt, in our opinion, that this whole contract obligation is a liability to the full extent of the thirty years rental; and it is equally clear that all unpaid sums would be aggregated until paid. It seems to us to come within the language as well as within the mischief of the prohibition. The City Council is only an agency to represent the people of the municipality, and the Legislature has seen fit to give them what is deemed ample power to raise money year by year for the needs of each year, and no more. When they desire to make large outlays, or to burden the future revenues of the city, it is left to the parties who are more directly interested to determine how far this shall be done.

"There is no occasion to construe term beyond their natural meaning; and as this clause was intended for beneficial purposes, and to carry out the constitutional mandate *to restrict* the powers of cities and villages in taxation, borrowing money and contracting debts, it should be given its full effect.

"If this contract is void, there can be no recovery for what has been furnished under it. There would be little safety in any such restriction, if it could be evaded by claims year after year, of the very same thing which was prohibited to be contracted for. As this question has been settled by our own decisions, we need not inquire elsewhere.

Detroit vs. Mich. Paving Co., 36 Mich. 335.
Detroit vs. Robinson, 38 Mich., 108."

If such was the ruling in those cases, how much stronger is the case at bar, where the corporation is absolutely restrained from issuing any obligations or evidence of indebtedness without a vote of the tax payers.

But say counsel for the complainant, section 3121 of the water works act provides as follows: "It shall and may be lawful for the municipal authorities of any city, village or town, in which any company is or shall be formed for the purpose of supplying such city, village or town and the inhabitants thereof with water, to contract and agree with such company for the supply of water for public, municipal and other purposes, and for the time and mode of payment, and may issue their obligations therefor," was enacted in 1873, and by implication repeals the above charter provisions as to water contracts.

This may be true, the authority to contract may exist, but it must be exercised in the form provided by law, namely: vote of the tax payers.

It is no answer to this to say that sections 80 and 81 of the city charter relate only to voting on bonds, since section 34 expressly refers to sections 80 and 81, as pointing out the manner in which "notes, obligations and evidences of indebtedness" are to be given, and sections 80 and 81 prescribe the mode and manner of taking a vote as to the issuing of such evidences of indebtedness.

Besides, if the construction claimed were to be given to section 3121 of the water works act, that act would be a violation of the constitution of Michigan, Article 15, Section 13, which provides that the legislature "shall provide for the incorporation and organization of cities, and shall restrict their powers of taxation and contracting debts." If Section 3121 authorizes the city to contract for water, without any regard to the amount of the contract, such Section is a clear violation of the foregoing clause of the constitution. It would seem also as if this question had been decided in the Grand Rapids and Niles cases cited ante.

2. Section 91 of the charter of the city of Grand Haven provides: —"Every act, obediance, or resolution passed by the common council of said city, before it shall take effect, and within five days after its passage, shall be presented, duly certified by the city Recorder, to the Mayor for his approval. If he approves thereof, he shall sign it; if not, he shall return it with his objections in writing to the city Recorder, and the Recorder shall submit said objections to the common council at their next regular meeting, who shall enter said objections upon their record and proceed to reconsider the matter, and if, after such reconsideration, a majority of all the members elected shall agree to pass the same, it shall take effect as an act or law of the said city. If the Mayor shall not return any such act, ordinance, or resolution so presented to him within five days after he shall have received the same, it shall take effect in the same manner as if he had signed it."

There is no evidence in this record that the resolutions of April 12, 1883, or that authorizing the contract of November 8, 1883, ever were presented to the Mayor for his approval, or that he never signed the same. Such being the case, the said resolutions have never taken effect.

On these grounds the Contract is void.

E.

If we reduce the complainant's case to its lowest terms, it amounts to this, namely:

*A monopoly of the Grand Haven water business in the hands of the Grand Haven Water Works.*

The complainant claims that the defendant city is damaging and impairing its mortgage security, to-wit: certain lands of the water works, the buildings, wells, machinery, pipes and works thereof; the works, pipes, mains, hydrants, stop gates, connections and plant of the water works; the income, rents, issues and profits to be received therefrom, particularly from the contract with the city; and the company's franchises of all kinds. (R. 231).

What damage has the city done or threatened to this mortgage security? It has in no way interfered with the company's plant. Its pipes, mains, pumps and tangible property are now precisely as they always were, and in its full possession. So are its franchises. So are its income, rents, issues and profits. The city has in no way interfered with any of these things, except by refusing to pay rent itself, for which the defendant water works or the complainant (R. 232-3) have an adequate remedy at law.

The only way in which defendant city has damaged, or threatened to damage, complainant's security, is by engaging in the water business in competition with the Water Works Company, more extensively than heretofore, thereby destroying its monopoly. Therefore, we say, in all confidence, that the complainant's bill is one to declare and establish a monopoly of the water business in the City of Grand Haven.

F.

To establish this case, complainant must heretofore establish these propositions, viz:—

1. That the defendant city, *having the power to do so*, has contracted to give the Grand Haven Water Works a monopoly of the water business in the City of Grand Haven, or

2. That the city, *having the power and right to grant a monopoly*, has so acted as to estop itself from asserting that it has not granted such monopoly.

If the city has no power to grant a monopoly expressly, of course none can be created by estoppel—since a municipal corporation may not do indirectly, what it cannot do directly.

In re Comstock, 3 Sawyer, 218.
Spare vs. Home Ins. Co.; 15 Fed., R. 712.
Lyddy vs. Long Island City.; 104 N. Y., 218.
State vs. Atlantic City; 9 Atl., Rep. 759.
Burrill vs. Boston; 2 Clifford, 590.
Bank Amer. vs. Banks; 101 U. S., 240.

G.

The city never contracted with the water works to grant a monopoly. The question of *fact* is settled by an inspection of the contract. (R. 15-19).

H.

If such contract had been made, it was ineffectual because the City of Grand Haven has no power to grant a monopoly. It is elementary that a municipal corporation has no powers not expressly granted, or indispensible to the proper exercise of the granted powers, and that a municipality cannot grant a monopoly unless thereto expressly authorized, is too well settled to allow controversy.

G. R. E. L. & P. Co. vs. G. R. E. E. L. & F. G. Co.; 33 Fed., Rep. 667.
Saginaw Gas Light Co. vs. Saginaw; 28 Fed., Rep. 529.
Garrison vs. The City of Chicago; 7 Biss., 480.
Gale vs. Kalamazoo; 23 Mich., 344.

The Charter of the City of Grand Haven confers upon the city no express right to grant an exclusive franchise, and that right is in no way indispensable to the due exercise of the conferred powers of the city. In fact it is not claimed by the complainant's counsel that such authority exists under the defendant's Charter.

It is, however, claimed by counsel for the complainant that the power to grant an exclusive franchise is conferred upon the City of Grand Haven by the water works act, which was passed by the Legislature of Michigan subsequent to the passage of the City Charter.

The act referred to is found in

1 Howell's Statutes, Sec. 3110 to 3127, printed as an appendix to this Brief.

An inspection of this act shows, that it nowhere *expressly* authorizes or purports to grant an exclusive franchise.

Counsel for complainant, in the Court below, claimed that, power to grant an exclusive franchise was to be IMPLIED from the provisions of this act.

The act is entitled "An act to authorize the formation of companies for the introduction of water into towns, cities and villages, in the State of Michigan."

Not a word here about authorizing cities to grant a monopoly of water privileges, and as the constitution of Michigan, Art. 4, Sec. 20, provides: "No law shall embrace more than one object, which shall be expressed in its title," a forcible presumption seems to arise that no such object was intended.

Let us go further and examine the act itself, and see if such power is conferred. Before any water works company can be organized to do business in any city, the Common Council must declare by resolution that it is expedient to have water works, and that it is inexpedient for the city to build them itself.

How. Stat., Sec. 3110.

This is a condition precedent to the organization of a company in that city.

Atty. Gen'l vs. Hanchett, 42 Mich., 436.

**This resolution binds the city to nothing. It is simply its permission to the company to do business, and imposes the duty on the city to grant the company the use of its streets to lay its mains.**

This act further provides, Sec. 3121, "it shall and may be lawful for the municipal authority of any city * * * in which any company is * * * formed * * * to contract and agree with such company for its supply of water for public, municipal, or other purposes, and for the time and mode of payment, and may issue their obligations therefor."

If every company so organized has an exclusive franchise in the city where it does business, no one else can supply water there. Water for city purposes is a necessity. If such monopoly exists, the city can get its water only from the company.

Such being the case, we ask, if it was the intention of the Legislature to grant a monopoly, why did it provide in the water works act, (Sec. 3121), "it shall and may be lawful for" the city authorities to contract with the company for water, thereby clearly implying that the city might or might not contract, as it saw fit, and as the city must have water, it is equally clear that the Legislature intended that it might get it from others than the company, or might provide it itself. Where is the implied monopoly? If a monopoly was intended, the Legislature would have said, "the city, etc., shall contract."

Counsel for the complainant has also argued for an exclusive franchise, because Section 3125 of the water works act, authorizes the city, at the end of twenty-five years, to buy the water works plant and franchises, and he argues, why should the city buy what it has already, to wit, a franchise to run water works.

As was said by our Supreme Court, there is no inconsistency in the existence of both franchises at the same time, G. R. Hydraulic Co, late of Grand Rapids, 66 Mich. 606, and such is clearly the understanding and contract of the parties in this case.

See Contract, Rec. 19.

Which gives the city the right of purchase in ten years, "the franchise not to be taken in consideration;" showing clearly the agreement of the parties that the franchise was not exclusive, since, if the city has no such franchise, its purchase of the works would be useless, as the exclusive franchise would still remain in the company and the city would have no right to operate the works if it bought them.

Section 3126 allows the city to become a stockholder in a company.

These are all the provisions of the water works act, which require or permit any action on the part of the city.

When this act is construed in the light of the rule laid down by this Court that all legislative grants to corporations are to be construed strictly and in favor of the public as against the corporation, it becomes evident that no monopoly has been or can be granted under this act.

Minturne vs. Larue, 23 How. 435.
Scott vs. Shreveport, 20 Fed. Rep. 714.

Ottawa vs. Cary, 108 U. S. 110.
Bridge Co. vs. Bridge Co., 11 Peters 420.
Railway Co. vs. Railway Co., 13 How. 71.
Rice vs. Railway Co., 1 Black 356.
Bank vs. Skelly, Id. 436.
Turnpike Co. vs. Illinois, 96 U. S. 63.
Fertilizer Co. vs. Hyde Park, 97 Id. 659.

In this last case, the Court said: "The rule of construction in this class of cases is that it shall be most strongly against the corporation. Every reasonable doubt is to be resolved adversely. Nothing is to be taken as conceded but what is given in unmistakable terms, or by an implication equally clear. The affirmative must be shown. Silence is negation and doubt is fatal to the claim."

I.

The only argument which we have heard presented on this point in favor of the complainant is that urged in the case of

Atlantic City Water Works vs. Atlantic City, 39 N. J. Equity, 367, viz:

That in a city the size of Grand Haven, it would be impossible to induce capitalists to invest money in water works unless certain of due returns, which, in such a city, cannot be had except through an exclusive franchise; ergo, an exclusive franchise must be implied.

This doctrine makes the question of exclusive franchise or none rest on the question of whether or not due returns can be had for the money invested, and introduces into the administration of the law an uncertainty which cannot be tolerated, since what would suffice to maintain such a franchise in one instance might fail to do so in another.

The defect in this argument is fully pointed out by the learned Judge who heard this case, in his criticism on the Grand Rapids Electric Light case cited *ante*.

If, as counsel claim, a monopoly is granted to the Water Works Company by the State by the act authorizing the incorporation of the company, it necessarily follows that every company organized under this act has a monopoly independent of any special circumstances in each case. It is nonsense to claim that a legislative act grants a monopoly in one set of circumstances and not in another.

J.

Upon the argument in the Court below, it was claimed by counsel for the complainant, that the exclusive franchise which it claimed for the defendant company came *by legislative grant*, and not by grant *from the city*.

Concerning this we say that complainant must succeed, if at all, upon the allegations of the bill.

Boone vs. Childs, 10 Peters 177.
And cases cited,

It is not alleged in the bill that the State has granted to the Grand Haven Water Works any exclusive franchise. On the contrary, the grant was asked from the City of Grand Haven.

> See proposition Wiley Construction Company to The City, in the bill. (R. 19.)

And the bill throughout alleges the privileges of the Co. to come from the city.

We subjoin all the allegations of the bill on this point:

"And with that view and for that purpose the said Construction Company at the time aforesaid, proposed and made to the common council of said city a proposition, in writing, to form a Water Works Company or corporation at said city, under the laws of the State of Michigan, and thereby to construct water works and to supply said city and the inhabitants thereof with water therefrom, for fire, mechanical, manufacturing and domestic purposes, for the term of twenty-five years, upon the terms and conditions and *for a grant of the franchises and privileges in said proposition in writing set forth;* a copy of which said proposition in writing is attached to and made a part of 'schedule B" hereto annexed, and is hereby made a part of this bill and of the allegations thereof. (R. f. 4.)

"5th. And your orator further shows, that upon receiving said proposition in writing, the said common council (determined to discontinue the use of said city water works as a means of supplying said city with water, and to abandon that means of furnishing and supplying water in the city, and) by resolution, directed that a contract should be arranged between the said city and said proposed Water Works Company for the construction of water works and the supplying of water by it to said city and the inhabitants thereof, for the uses and purposes aforesaid, in conformity with the terms in said proposition in writing contained. (R. f. 4.)

"7th. And your orator further states and charges, that upon the organization of said Water Works Company, the said Grand Haven Water Works as aforesaid, and on or about the eighth day of November, 1883, the said city of Grand Haven, by the action and direction of its said common council, and in pursuance and by reason of the proceedings aforesaid, made and entered into the contract in writing with said corporation, the Grand Haven Water Works, wherein and whereby the said Water Works Company, for certain considerations in said agreement or contract, and in the said proposition in writing mentioned, agreed on its part, among other things, to build and construct Water Works at said city, and to furnish water therefrom to said city, to extent and of the quality and upon the terms and under the circumstances mentioned in said contract and proposition in writing, a copy of which proposition in writing was attached to and made a part of said contract; and *in and by said contract the said city of Grand Haven, for certain considerations therein and in said proposition in writing mentioned, gave and granted to said Grand Haven Water Works the privileges and franchises therein mentioned, including the right to build and erect its Water Works, and to lay its water pipes in the streets, lanes and alleys, avenues,*

*docks and other public places in said city*, and agreed, among other things, that upon the performance of said contract by said Grand Haven Water Works, to pay to it the sum of $4,200 per year, in equal quarterly payments, for water to be supplied to said city from its works, and further agreed that said proposition in writing should be a part of said contract and that it, the said city of Grand Haven, would perform all things on its part to be performed as within specified; which said contract was duly executed on the part of the said Grand Haven Water Works, by its President and Secretary, and by and on the part of the said city Grand Haven, under direction of said common council, by its Mayor and Recorder; a copy of which said contract in writing, and a copy of said proposition in writing [which as hereinbefore stated, was made a part of said contract] thereto attached, is hereto annexed, and the whole is marked "Schedule B" and is here made a part of this bill and of the allegations thereof (f. 5-6).

"8th. And your orator further states and charges, that immediately upon the execution of said contract with said city as aforesaid, the said Water Works Company entered upon the construction of said Water Works, and upon the performance of said agreement with the city, and constructed its said Water Works substantially in accordance with said contract and the requirements thereof; *and by the permission and authority of the common council of said city* and in pursuance of the provisions of said act of the Legislature above mentioned, *laid its water pipes in the streets and public places in said city* and set and placed thereon the number of hydrants for fire purposes required for said contract, which hydrants, sixty in number, were set and located at such places as were directed by said common council, or by such officers or persons as were directed by said council to designate and fix the location of the same. (f. 6-8).

"And in the reliance upon the enjoyment by said Water Works Company *of the rights, privileges and benefits granted it by said city as aforesaid*, and in pursuance of the passage of said resolution, and by the said agreement and proceedings of said common council, whereby said company would be able to maintain the value of said mortgage security, and to pay the said bonds secured thereby. (f. 13).

"14th. And your orator further states and charges, that in addition to the said moneys loaned and obtained upon said bonds as aforesaid, the said Water Works Company, *in reliance upon the benefits of the rights and privileges granted to it as aforesaid*, of furnishing water to said city and to the inhabitants thereof, from its said water works during the time in that behalf stipulated in said contract. (f. 13).

"15th. And your orator further says and charges that said city by means of the acts and determinations of its said common council hereinbefore set forth, and by means of its resolutions of its common council, *and by means of its said grant of the privileges and franchises so as aforesaid granted by it* to the said Water Works Company, and by its said agreement to take and receive water from said company for the use of said city, and especially by the passage of said resolution declaring it inexpedient for said city to construct said water works itself, invited and held out inducements to, and thereby

induced the said Water Words Company to invest and expend its funds and means in the construction and building of its said works for supplying water to said city and its inhabitants, and thereby give it to understand and believe, and to be assured, and led and induced it to construct said works, upon the understanding, belief and assurance that so long as it was able, ready and willing to furnish said city and its inhabitants with an adequate supply of water, in pursuance of and in accordance with said contract, that said city would not impair or destroy the value of its said works by constructing and maintaining other water works itself, for the supplying of water in said city; and thereby led and induced the holders of said bonds to purchase and invest their money therein, upon the security of said mortgage. (f. 14-15).

"16th. And your orator further charges that said city, by said resolution on the 12th of April, 1883, so passed by said common council as aforesaid, and *by its grant of the rights, privileges and franchises so granted to said Water Works Company* as hereinbefore set forth, and by its said contract and agreement with said Water Works Company, so made as aforesaid, virtually and in effect promised and agreed to and with said Water Works Company, that in consideration of the constructing said water works and furnishing and supplying said city and the inhabitants thereof with water, according to and in compliance with said agreement, during the time in that behalf in said contract mentioned, that it, the said Water Works Company, should during such times have and enjoy the right and privilege of furnishing and supplying water from its works to said city and its inhabitants thereof, and the benefits thereof, and that during such time the said city would not build and construct water works in said city, or itself supply said city and the inhabitants thereof with water; and that the violation by the city of such promise and agreement on its part by building and constructing other water works, and supplying itself and its inhabitants with water therefrom, would greatly damage and depreciate the value of the water works of the company, and consequently would greatly depreciate the value of said mortgage securities, to the great loss and damage of said bondholders. (f. 15-6).

"Witnesseth, as follows, to wit: The said Grand Haven Water Works for and *in consideration of the franchise to be granted to it*, water to be rented of it, and the convenants and promises otherwise to be performed *by the said party of the second part* hereby agrees to build and erect water works, and to furnish water to said city of Grand Haven, to the extent, of the quality and upon the terms and under the circumstances specified in the proposition of the S. L. Wiley Construction Company, presented to the mayor and common council of said city of Grand Haven, on the 25th day of September, 1883, which said proposition is adopted by said first party, in all things, and a copy of which is hereto attached and made a part of this contract: (contract, f. 25).

"Said second party, upon its part, for and in consideration of the covenants and promises of said first party hereinbefore mentioned on its part to be performed, *hereby grants and gives to said first party the right to build and erect its works, and to lay its pipes in the streets, lanes, alleys, avenues, docks and other public places*

*in said city*, and upon the performance of this contract by said first party agrees to pay to it the sum of four thousand two hundred dollars ($4,200) per year, in equal quarterly payments, on the first days of January, April, July and October in each year; and second party agrees upon its part that said proposition of the S. L. Wiley Construction Company shall be a part of this contract, and that it will perform all things on its part to be performed as therein specified. (f. 26.)

"We will, *if granted a franchise*, organize a company in accordance with the requirements of your State statutes, and do all that may be necessary to be done in such cases under your charter and laws. (f. 27.)

"The city at any time after the expiration of ten (10) years shall have the right by giving twelve (12) months notice of their intention so to do, to purchase the works at a fair and equitable value of the same at that time, *the franchise not to be taken into consideration*, but merely the actual value of the machinery, piping system, buildings, etc.

"And if a price cannot be mutually agreed upon, then an appraisement shall be made of said works, which shall be in accordance with the laws governing such cases in the State of Michigan.

"*In consideration of the above, we ask the city of Grand Haven to:*

1. *Grant a franchise to the Grand Haven Water Works*, a corporation to be hereafter organized, to lay mains and pipes for the conveying and distribution of water throughout the city of Grand Haven, this franchise to be for a period of twenty-five years. (f. 31.)"

Concerning this claim of a monopoly, either by grant or by estoppel, the conclusion is, therefore, clear.

1. That the City of Grand Haven has granted no monopoly.
2. That it had no power to grant the same, and
3. That having no such power, it cannot be estopped, since that would be creating indirectly what cannot be done directly.

A municipal corporation cannot abdicate its powers which are for the public benefit.

> Dillon on Municipal Corp., Sec. 61 and cases cited.
> Gale vs. Kalamazoo, 23 Mich 344.
> And cases cited ante.

How then can it be estopped from using those powers?

## K.

## THERE IS NO ESTOPPEL IN FACT.

It appears from this record that at the time of the passage of the resolution of April 12, 1883, the defendant city had a small water works of its own. (R. 137.) It is alleged in the bill that the city "determined to discontinue the use of said city water works, as a means of supplying said city with water, and to abandon that means of furnishing and supplying water in the city." (R. 39.)

This allegation is denied. (R. 46.)

The allegation is not proved. We have before us all the proceedings of the common council in this matter. (R. 94 ) There is no such determination of record.

There seems to have been a verbal proposition made by the Wiley Construction Company to buy the city's works. (R. 138-9.) It was never accepted by the City. The City continued to operate its water works the same as before. (R. 158, 307, 207.)

No complaint was made by the Grand Haven Water Works nor complainant until the City began to extend its work. The rest of the facts upon which the complainant's estoppel is based are the resolution of April 12, 1883, and the contract of November 8, 1883.

The resolution of April 12 is but a permission to the water works to do business, and the contract is simply to pay rent for a certain supply of water.

L.

This contract has never been performed by the Grand Haven Water Works, and consequently to hold the City not only to the precise provisions thereof, but also to extend those provisions into granting a monopoly, would be grossly unjust and inequitable.

In what has the Grand Haven Water Works failed to perform?

1. The contract provided that the works were to be done July 1, 1884. (R. f. 25 ) That this was of the essence of the contract, admits of no doubt, since the water works were primarily so far as the city was concerned, for fire protection.

It is undisputed that this provision was not complied with. (R. f. 149.) An extension of two months was granted. (R. f. 149.) And at the end of that time the works were not done. (R. f. 150-1.) September 4th, the city rescinded the contract. (R. f. 150.)

Complainant admitting this breach, says it was waived by the use of the water for extinguishing fires by the Grand Haven fire department.

The record shows that the first fire after the completion of the works, was Jan 18, 1885. (R. f. 259.) The firemen used water from the works 30 minutes. At the next meeting of City Council such use was forbidden. (R. f. 156.) This order was reiterated in stronger terms, April 16, 1885. (R. f. 156.)

Notwithstanding these orders, the firemen continued to use the water down to 1887, to extinguish fires, and the Mayor and some of the Aldermen have been at some of the fires.

Of course if the contract is valid, but not fully performed, the city is liable for *quantum valebat* for water so used, but it cannot be held that the use of water by the servants of the city contrary to orders, creates any estoppel or waiver, so as to oblige the city to accept the contract as an entirety. To so hold would be very unjust.

2. By the contract, the water works were to develop sufficient power to throw 6 one inch streams simultaneously 100 feet high. (R. f. 28.)

This has never been done. A test was had January 15, 1885, and

water was thrown from 60 to 80 feet high, from 6 streams. (R. f. 154-5, 257, 419, 448).

The Water Works Company never tried again—and from that day to this, the test has never been attained.

This complainant seeks to excuse, by showing the pumping machinery out of order, bursted pipes, etc. (R. f. 256-258), but no such test was ever again attempted.

At this test the pump packing came out. The pumps became disconnected. (R f. 391-2). The pumps pounded and pumped air. (R., f. 412). Water supply was short, so that the pumps pounded so that Mr. Emlaw, a practical mill wright, thought that they would go out of the building. (R., f. 449). The water supply from the wells were exhausted in 15 minutes by throwing one one-inch stream, (R., f. 449), showing a grossly inadequate supply, as a one-inch stream throws only 173 gallons per minute. (R., f. 253).

3. The engineer, who planned these works, Mr. Wiley, admitted the pumps were not properly set (F. 249), and it is admitted that all the drive wells are on the same lines, so that if a single one of the 92 wells used became dry, or cracked or exhausted so as to admit air, all the wells on that line (there are two lines) become useless. (R., f. f. 236, 292-3, 265.)

The company's engine driver claims that the reason the supply was short was that the wells nearest the suction pumped out first and admitted air so that the water could not be pumped from the wells further out on the line. (F. 799 )

The contract calls for a hydrant tested at 300 pounds to the square inch. The actual test was only 250 pounds. (F. 394).

4. Water supply—The contract (R., f. 27).

"WATER SUPPLY.

"We will locate and establish a good and sufficient water supply for fire, mechanical, manufacturing and domestic purposes, and said water shall not be deleterious to the health of those who may use it."

"SOURCE OF THE WATER SUPPLY.

"The source of water supply shall be from such point or place as shall best subserve the joint interest of the city of Grand Haven and the company, but it shall at all times be ample for the purposes contemplated."

WELLS, FILTERS, ETC.

"We will establish wells of sufficient capacity, either open or driven, and construct all needful filters or infiltration galleries, * * *."

We claim that the legal meaning, in fact the only meaning, of these words is, that the water furnished is to come *from wells.* That it required the Co. to furnish *from wells.*

1. A good water supply.

2. Sufficient and ample for fire, mechanical, manufacturing and domestic purposes.

3. Water not to be deleterious to health.

It is proved that water for fire purposes was scarcely ever obtained from the wells put down. It was almost always taken from the river (f. 304, et seq., f. 388). That this water was bad is shown not only by the testimony of many witnesses but by the fact that the Co. made a practice of flushing out the mains after fires (f. 306). There is universal agreement that the water after a fire was warm, stunk, and was discolored.

But the use of river water for fires was not all. It stands absolutely uncontradicted on this record that during nearly the whole of the first two years after the works started up, the water pumped into the mains was from $\frac{1}{3}$ to $\frac{1}{2}$ from the river, (R., f. 388-390). And this water from the river furnished for domestic uses was bad.

We give below an abstract of the testimony as to this water from the river.

Solon L. Wiley, who built the works, was a non-resident and was seldom at Grand Haven. (F. 207, 223, 228, 237).

He says (referring to the wells), the source was the best and most suitable in the city. (F. 214). That the well water was pure (f. 214), and that it could not be deleterious to the health. (F. 218). That the water supplied by the company to its consumers was excellent in quality, except during the summer of 1887. (F. 223). But he admits he had no personal knowledge about it, as he was not there. (F. 223). And he did not know of river water being pumped into mains (f. 248). (*Wiley on River Water.*) Grand River water has not much sediment except in times of freshet (f. 342) but is somewhat colored owing to its *running through low lands* (f. 343). And he admits that he would not use river water himself *in the summer season*, although he considers it superior to well water two-thirds of the year (f. 347).

Geo. Van Patten, Superintendent of water works from Aug., 1884, to Sept. 1885, (f. 254).

He says they drew from driven wells for domestic service (f. 262). Pumped from river on *one* or *two* occasions (f. 263). Flushed out mains after using river water (f. 265). A few other occasions when they drew from the river. Had complaints when water was good (f. 264-5) and he swears that in *1885* there was no pumping from the river except on *three* occasions (f. 282-3).

Compare this latter statement with this.

1 fire stream throws 250,000 gallons in 24 hours, or 10,410 gallons per hour (f. 253).

The supply from the wells was 300,000 gallons per 24 hours, or 12,500 gallons per hour (f. 216).

March 9, 1885, the fire department used 2 streams 1 hour, or 20,820 gallons from a supply of 12,500 from wells.

March 26th, 1885, the fire department used 4 streams one hour and 2 streams two hours, or 64,460 gallons from a supply from wells of 25,000 gallons.

March 29, 1885, two streams was used one hour—20,820 gallons, supply 12,500.

April 1st, same.

July 4th, 2 streams 45 minutes—15,615 gallons, supply 9,399 gallons.

July 31, 8:20 p. m., 2 streams 35 minutes—10,410 gallons, supply 6,250.

July 31, 9 a. m., same.

October 8th, 1885, 2 streams 1½ hours—31,230 gallons, supply 18,750.

December 5, 1885, 2 streams 55 minutes—18,000 gallons, supply 11,500 gallons.

December 21, 2 streams 45 minutes—15,615 gallons, suppply 9,399. (R., f. 295-8. 259-62).

And so on. A computation shows that at nearly every fire they *had* to turn on the river.

And again, Mr. Van Patten testifies positively as to 1885, and he was there only nine months of that year (f. 254).

Augustus M. Cosgrove, Superintendent of Co., Sept. 1885, to date (f. 293).

He says supply has always been sufficient for all purposes and no complaints as to *sufficiency* (f. 301). Used river water during fires (f. 304) about ½ dozen times, and sundry other times (f. 304 et seq.)

Don't think river water had any effect on public health, though he flushed mains after fire (f- 310).

Has had complaints from consumers as to quality of water.

Water too warm, red, etc. (f. 310).

This he says was caused by water standing in pipes. Discoloration did not make water deleterious (f. 310). *Recollects* no other complaints (f. 311).

Don't know of his own knowledge that river water was used in the summer of 1887 (f. 315-6). *This witness don't consider marsh water deleterious to health* (f. 322). More complaints about water in 1887, etc., (f. 328-30).

Don't think connected with river in 1887 more than half dozen times (f. 326). Heard half dozen complaints about water (f. 326). Water discolored after fire (f. 326).

More complaints in 1887 (f. 328). Flushed mains after fire (f. 328-9). River water not so clear as well water and warmer. (f. 329). Thinks river water good *except during two or three months in year* (f. 145).

Levi Schofield: Has used water for domestic purposes since spring of 1884. (Wasn't any till Nov. '84) (f. 351). "I have some fault to find with the water, after a fire especially." It had the appearance of river water; was yellowish and muddy; smelt different from well water; was so for a few hours after fire (f. 351-2). No other fault to find (f. 351). Don't know whether it was deleterious to health or not (f. 352).

Geo. W. Stickney: Treasurer of Co. (f. 360), water consumer, but never used it for culinary or drinking purposes (f. 361). Has seen it used and looked at it. Except last summer (1887) water was good, bright and clean (f. 362). Don't think himself very competent to speak about it, as his knowledge is very slight (f. 363).

Jacob Baar: consumer for household uses for 2½ years. Water is *satisfactory to him* (f. 431). *Won't say it was pure all the time,*

*and didn't say it was good for domestic and culinary uses* (f. 438); only said it was satisfactory to him, except once in summer of 1887, for a few weeks. Then water was unclean, not good (f. 439). Except then, always pure and clear, even after a fire (f. 439).

*If water furnished was one-half or one-third river water should not think it pure* (f. 440). *Put down a well for his own use, when water was bad* (f. 441). Has since used company's water (f. 542).

This witness also testifies that this water question had been made an issue in city elections (f. 445), and that the elections had resulted in favor of extending city works (f. 445).

Sherman H. Boyce: Used water since February 2, 1887, (f. 462). With few exceptions the water was very nice, perfectly clear in appearance and perfectly satisfactory to taste. Exceptions water roily and dark colored after fires; so for a few hours afterwards (f. 462-4).

Derk Bakker: used water two years for cooking and drinking. Pretty good water. After a fire, for a few hours, it would be discolored, and in summer it was warm (f. 465-6).

## DEFENDANT'S EVIDENCE.

Joseph Douglas: Defendant Water Works Company's engineer from October, 1884, to September, 1886, (f. 387, 401). The first three or four months after starting pumped from wells, after that used more or less river water, till in July and August pumped one-third river water. At fires, if pumped more than twenty minutes, had to use river water. After first six months, during hot weather, half supply was river water (f. 389-90). During last year of his stay, used a little more river water than before (f. 390). Has known locality of supply eight years. Before wells put in surface water used to stand there. Since pumping began surface water gone. (f. 392). Calls the place from which river water is pumped "the dirtiest place I have seen along Grand river." Is a marsh there, and just above the suction two large privies, used by a large force of mill hands (f. 393-4). Ground around pump house made of saw mill refuse (f. 397). Used water from drive wells himself, not from river (f. 398).

See R. p. 236-246.

Dr. W. S. Walkley: Physician thirteen years. Used water three years (f. 402). Began in June, 1885. Water then very bad, looked like weak tea. Did not use it except after boiling. Water stunk all summer (f. 403). Some of his family sick all the time. Water bad all the time since he used it. It was deleterious to health; a horse of his refused to drink it (f. 403-4). After using it six months every member of his family had malarial fever.

R. f. 402-406.

Wm. Cass: Used water four years. During first year there were many times when water was not fit to use; at other times it was quite

passable. Water was better then than at any time since. Never has been good. Smelled so bad could not use it. It would smell fearfully. Didn't use it for drinking much for three years. In winter it was passable. In summer so bad could not drink it. Couldn't stand smell. Looked like slough water; smelt like it. Wife would not use on account of smell (ff. 407–411).

Henry Blocker: Describes action of pumping machinery during test. Used water since December 1st, 1885. Says it will do for wetting foundry sand, but was undrinkable in summer. "It smells it would make a man sick to drink it." Has been so from spring 1886 down. It is drinkable in winter. Never used it for domestic service (ff. 411–14).

Joseph Palmer, Fire Chief: Describes test (f. 415). Water furnished during fires was invariably roily, dirty, muddy, (f. 417).

Chas. E. Wyman: Used water from the laying of the pipes till July, 1888. Then quit because water was not very good to use. Part of the time the water was very bad; could not use it except on lawn and to wash buggies. After fire was very bad, red and muddy. Such condition would continue for 24 hours or so. Found bugs and worms in water. Since then never has used it to drink or in house (f. 425-427). After a fire was not fit for a horse to drink for 24 hours (f. 427).

And. J. Emlaw: Describes test (f. 448-454).

H. D. Irish, proprietor Cutler House: Used water two or three years after company started. When first put in was good as he could ask. After first six months it began to taste of the river; had a kind of rotten wood taste. That continued some time—till summer of 1887. Guests complained. Put down wells, and since had not used it for drinking. Water was worse after a fire, and would continue so half a day. (f. 455-458).

Henry Baar: Used water in drug store three or four years. Quit because did not think water fit to use (ff. 458-61).

It would seem very clear from this evidence that the G. H. Water Works has never complied with its contract, either in reference to source of supply, quantity or quality of water, and that, therefore, even if the contract with the city is valid, and grants a monopoly, its violation would release the city, and authorize it, under its police power, to provide its own water supply.

## L.

In conclusion we claim that this bill was rightly dismissed:

1. For want of jurisdiction.
2. Because complainant having no rights in the Water Works franchise cannot complain of an injury thereto.
3. Because the contract between the City and the Water Works was void

(a) Because not authorized by the tax payers as the charter provides.

(b) Because the Mayor never approved (as required by the charter of the City) the resolutions authorizing the formation of the G. H. Water Works or that authorizing the City to contract.

4. Because the monopoly claimed for the G. H. Water Works does not exist.

(a) By any State grant.

(b) By any City grant nor

(c) By any estoppel against the City.

5. Because if such monopoly was granted by the contract in question, no Court of equity would enforce it in the face of the fact here proved, that the Water Works never performed its side of the agreement.

An affirmance is respectfully requested on the merits.

LYMAN D. NORRIS,
MARK NORRIS,
Of Counsel for defendant City.

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## CHAPTER 84.

"An act to authorize the formation of companies for the introduction of water into towns, cities and villages in the State of Michigan. No. 113, April 3, 1869, p. 188.

§ 3110. 3355. 1869, p. 188, April 3, Act 113. SECTION 1. The people of the State of Michigan enact, that whenever the common council of any city or incorporated village, or the municipal authority of any town in this State, shall, by resolution, declare that it is expedient to have constructed works for the purpose of supplying such city, village or town, and the inhabitants thereof with water, but that it is inexpedient for such city, town or village, under the power granted in its charter, to build such works, it shall be lawful for any number of persons not less than five, to organize a company for the construction of such water works, or for any company previously organized, to construct such water works under the provisions of this act, and such corporation shall have all the powers and privileges prescribed in the act in regard to corporations, being chapter fifty-five, of revised statutes of eighteen hundred and forty-six, and chapter seventy-three, of the compiled laws. They shall be capable of suing and being sued in any Court of this State; may have a common seal, and alter and amend the same at pleasure; may elect in such a manner as they may determine, all necessary officers; may fix their compensation and determine their duties, and make from time to time such by-laws, not inconsistent with the constitution and laws of this State, as a majority of the stockholders shall choose.

§ 3111. 3356. SEC. 2. Any number of persons not less than five, who shall associate according to the provisions of this act, under any name assumed by them, to form a company for the purpose of supplying any city, town or village, or the inhabitants thereof, with water for any and all purposes, shall, under their hands and seals, make an acknowledge before some person authorized by the laws of this State to take acknowledgments of deeds, a certificate which shall specify—

First. The name by which such company shall be known;

Second. The object for which such company shall be formed;

Third. The amount of capital stock of such company, and the number of shares into which the same is divided;

Fourth. The amount of capital stock actually paid in;

Fifth. The names of the stockholders, their respective residences, and the number of shares held by each;

Sixth. The name of the city, town or village, and county in which the operations of the company are to be carried on, and the place in this State where the office for the transaction of business is located.

Seventh. The term of years the corporation is to exist, not exceeding thirty;

And shall cause the same to be filed with the secretary of state of this State, and recorded in the county clerk's office of the county or counties in which such company shall conduct its business. They shall become incorporated under the name and style provided in such certificate, and are hereby authorized to carry on the operations named in such certificate of incorporation, and shall, with their successors and assigns, be deemed a body politic and corporate, in fact and in name, under any name assumed by them in their articles of association.

§ 3113. 3357. SEC. 3. Every such corporation shall. by their name have power to acquire and hold all such real and personal estate as shall be necessary for carrying on the business of said corporation.

§ 3113. 3358. SEC 4. The amount of capital stock in every such corporation shall be fixed by the stockholders in their articles of association, but shall in no case be less than ten thousand dollars; said stock may be increased from time to time as may be directed by the stockholders; and when the same is so increased, the same record shall be made of the fact, with the name of the stockholders, as required by section two of this act; and all the stock of said company shall be divided into shares of fifty dollars each.

§ 3114, 3359. Sec. 5. The officers shall be elected by the stockholders when fifty per cent. of the stock shall be subscribed, and ten per cent. of the amount subscribed paid in, and after a notice of at least two weeks has been given in some newspaper printed in the place where said business is to be located, said notice to be signed by at least three stoakholders; and the officers elected shall hold their office one year, and until their successors are elected; said officers shall have the general superintendence of the affairs of the company, and the management of the business, and may call special meetings of the stockholders, and a majority of the stockholders shall constiture a quorum at all meetings, and at all meetings each share shall be entitled to one vote, either in person or by proxy.

§ 3115, 3360. Sec. 6. Any corporation formed under this act shall have power to introduce water in any town, city, or village in the state, named in their articles of incorporation, and where the said corporation is located, for public or private buildings, or for other purposes, and for that purpose they are authorized and empowered to acquire and hold real estate in such, city or village, or contiguous thereof, if necessary, and to erect and maintain all necessary and convenient buildings, fixtures, machinery and other appurtenances incident or necessary, and to lay water pipes in and through

the streets, avenues, lanes, alleys, or squares of said city, town, or village, with the consent of the Municipal Authorities of the city, town or village, under such reasonable regulations as they may prescribe; and to make all ordinances and by-laws necessary and proper to carry into effect the foregoing powers; said corporation by their directors, agents, servants, or other persons employed, may enter upon the lands of any person or persons which may be necessary for said purposes, and may take the water from any springs, ponds, rivers, fountains or streams, and divert and conduct the same to said city, and may lay and construct any pipes, conduits, aqueducts, wells, reservoirs, or other works or machinery necessary or proper, and authorized for said purposes, upon any lands or property entered upon, purchased, taken or held. Said corporation may, as aforesaid, enter upon any lands, streets, highways, lanes, alleys, public squares, through which they deem it proper to carry said water from said springs, ponds, rivers, fountains, streams or reservoirs, and lay and construct any pipes, conduits, aqueducts and other works for said purposes, leavings said lands, streets, highways, lanes or public squares in the same condition, as nearly as may be, as they were before said entry; but the said company shall not, within the bounds of such city, town or village, lay and construct said pipes, conduits, aqueducts and other works, through any private garden, courtyard or building-lot, without the written consent of the owner thereof.

§ 3116, 3361. Sec. 7. Before entering, taking, or using any lands for the purposes of this act, the directors of the company shall cause a survey and map to be made, of the lands intended to be taken, or entered upon for any of said purposes, and by which the lands of said owners or occupants intended to be taken or used shall be designated, and which map shall be signed by the surveyor or engineer making the same, and by the president of said company, and be filed in the office of the clerk of the county. The company, by any two of its officers, agents or servants, may enter upon any lands for the purpose of making any examination, and for the purpose of making said survey and map.

§ 3117, 3362. Sec. 8. In case said company cannot agree with the owners or occupants of any lands, or water intended to be taken or used as aforesaid, for the purchase thereof, said company may, for the purpose of acquiring the necessary title and right to said lands or water, present a petition to the Circuit Court of the county where the company is located, at any term thereof, or during the vacation of the term, to any Judge of a Court of Record, praying for the appointment of three Commissioners; and such proceedings shall be had upon said petition as are prescribed in the act to provide for the incorporation of railroad companies, being Chapter 67 of the compiled laws, for the purpose of acquiring such title or right, except that the said Circuit Court or Judge shall appoint disinterested and competent freeholders residing in the township or municipality where the said premises are situated.

§ 3118, 3363. Sec. 9. The stock of every such corporation shall be deemed personal property, and certificates of stock shall be issued to each stockholder on the full amount of his subscription being paid in; the said certificates of stock may be transferable, but the transfer shall not be valid unless a record shall be made of the same in the

books of the company, in such form as the directors shall prescribe; and it shall be the duty of the directors to make out a written statement of all the stockholders, and the amount of stock held by each, when legally called upon by the proper assessing officer.

§ 3119. 3364. SEC. 10. The directors may call in subscriptions to the capital stock of such corporation, by installment, in such portions as they deem best, by giving notice thereof as provided by the by-laws; and in case any stockholder refuses or neglects to pay any such installment for the space of sixty days after the same shall have become due and payable, and after he shall have been notified thereof, the stock of any such delinquent stockholder may be sold by order of the directors, at public auction at the office of said company, after thirty days' notice published in some newspaper in the county where the corporation is located; and the proceeds of said sale shall be first applied in the payment of the installment called for, and the expense on the same, and the residue shall be refunded to the former owner thereof, and such sale shall entitle the purchaser to all the privileges of a stockholder to the extent of the share so bought.

§ 3120, 3365. Sec 11. The stockholders of all corporations organized under this act, shall be individually liable for debts contracted by said corporation during the time they were stockholders as aforesaid, which said liability may be enforced against any stockholder, founded on this statute, at any time after an execution shall be returned not satisfied against such company: Provided always, that if any stockholder shall be compelled by such action to pay the debts of any creditor, or any part thereof, he shall have the right to call upon all the stockholders to contribute their part of the sum so paid by him as aforesaid, and may sue them jointly or severally, or any number of them, and recover in such action the ratable amount due from the person or persons so sued.

§ 3121, 3366. Am. 1873 p. 2, Jan. 22, Act 2, Sec. 12. It shall and may be lawful for the municipal authorities of any city, village, or town, in which any company is or shall be formed for the purpose of supplying such city, village or town, and the inhabitants thereof with water, to contract and agree with such company for the supply of water for public, municipal, or other purposes, and for the time and mode of payment, and may issue their obligations therefor.

§ 3122, 3367. Sec. 13. There shall be an annual meeting of the stockholders at such time and place as the by-laws of the corporation shall designate, for the election of directors, and the transaction of business of the corporation. Special meetings of the stockholders may be called by the directors.

§ 3123, 3368. Sec. 14. The officers of such company shall be a president, who shall also be a director, a secretary, a treasurer, and such other officers, agents, and servants as the board of directors shall deem necessary for the transaction of the business of the company. Such officers shall be elected annually, by the directors, and may be required to give bonds, with penalty and sureties, to be approved by the board of directors.

§ 3124, 3369. Sec. 15. Whenever any such company shall have been duly organized, it shall be the duty of the common council of any such city or village, or the proper authorities of any such town,

by ordinance to grant to such company such right to the use of the streets, alleys, wharves (if any), and public grounds of said city, village or town, as shall be necessary to enable such company to construct the proper works for the supply of water for the use of such city, village or town, and its inhabitants; and the said common council may, in such ordinance, prescribe such just and reasonable terms, restrictions and limitations upon such company, in reference to the manner of using streets, alleys, wharves and public grounds; to the charging and collecting of tolls, water rents, or other compensation for the supply of water to be furnished by such company to such city, town or village, and its inhabitants, as it may deem proper; to guard against the improper use of such streets, alleys, wharves and public grounds, and to protect said city, town or village, and its inhabitants, from the imposition of undue or excessive rates or charges for the supply of water; but no restriction shall be imposed which shall prevent such company realizing upon its capital stock an annual income or dividend of ten per cent., after paying the cost of all necessary repairs and expenses, interest on all moneys borrowed, and five per cent. per annum into sinking funds, for the extinguishment of funded debts.

§3125. 3370. SEC. 16. From and after the expiration of twenty-five years from the time of the organization of such company, the common council of the city, town or village for which said company may have erected its works, shall have the right and privilege of purchasing from such company, all its buildings, reservoirs, fixtures, apparatus, and property of such company, with all its corporate rights and privileges, at such price as may be agreed upon; and in case of disagreement between the parties, the price to be ascertained and determined by five disinterested persons, not residents of said city or village, two of whom shall be chosen by said common council, two by the board of directors of such company, and the fifth by the four so chosen, who, when thus chosen and assembled, shall have power to determine, finally and conclusively, the amount which such town, city, or village shall pay for the rights, property, and franchises of such company as aforesaid.

§3126. 3371. SEC. 17. Any such city, town, or village may become a stockholder in any such company whenever the common council shall so direct, by resolution duly entered upon its minutes, after the question of so doing shall have been first submitted to the electors of said city, town or village, in such manner as the common council may have prescribed, and the said electors shall have voted in favor thereof. Such resolution shall specify the number of shares to be taken, and shall require the mayor, president, or other municipal officer to carry out the directions by subscribing for the number of shares indicated upon the books of the company. Any railroad, gas, manufacturing, or other corporation organized under any law of this state, and any insurance company organized under the laws of any state or country, doing business in this state, may subscribe for and own stock in such company, and be entitled to all the rights and privileges, and shall be subject to all the liabilities of stockholders. It shall be lawful for any such city, town or village to issue bonds, payable at such time as the Common Council shall direct, and bearing interest at a rate not exceeding eight

per cent. per annum, and to negotiate the same upon the best terms they can obtain. Such cities, towns and villages shall have power in addition to that given by their charters, to levy taxes not exceeding two per cent. on the assessed valuation per annum, sufficient to meet the principal and interest falling due on such bonds

§ 3127. 3372. Sec. 18. Any such company shall be deemed to be fully organized whenever half the capital stock named in its articles of association shall have been in good faith subscribed, and ten per cent. thereof paid in, and may thereupon enter upon the work of construction; and in order to raise moneys for that purpose, it shall have power to borrow money, to issue bonds, or other evidences of indebtedness, to execute mortgages, or trust deeds, as may be deemed necessary for that purpose; and it may also issue a preferred stock, if a majority of the stockholders of the company shall vote that it is advisable so to do; but in the case that such city, town or village is a stockholder, no such mortgage, trust deed, or issue of preferred stock shall be valid without the assent thereto of the Common Council of said city or village, or the municipal authorities of such town; and in such case it shall be deemed a misdemeanor for the directors of said company to contract debts to any amount in excess of the means provided for, by subscription to stock, and the estimated net receipts of the company from its rates for one year in advance, except they shall have first obtained the assent thereto of the said Common Council.

U. S. Circuit Court, Dist. of Cal.

U. S. vs. CURTNER. } No 3106.

RESPONDENT'S EXHIBIT "22." S. C. H., Examiner.

*Two Pages of Tract Book No* 11, *in U. S. Land Office.*

Township No. 2 south, range No. 1 east, district of ——.

| Description of tract. | | | | Contents. | | Rate per acre. | | Purchase-money. | | Name of the purchaser. | Date of sale. | Number of receipt and certificate of purchase. | To whom patented. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Part of section. | Section. | Township. | Range. | Acres. | 100ths. | Dollars. | Cents. | Dollars. | Cents. | | | | |
| | 13 | 2 S. | 1 E. | | | | | | | | | | |
| E. ½ | " | " | " | 320 | | | | | | State selection lieu 16 & 36 | June 12, 1865 | 333 | App'd Sept. 8, '70—list 18. |
| W. ½ | " | " | " | 320 | | | | | | State selection lieu 16 & 36 | June 12, 1865 | 301 | App'd Mar. 11, 1871—list 20. |
| | 15 | | | | | | | | | | | | |
| N. E. ¼ | " | " | " | 160 | | | | | | State selection lieu 16 & 36 | June 12, 1865 | 303 | App'd Sept. 8, '70—list 18. |
| S. E. ¼ | | | | | | | | | | W. P. R. R. Co. | Pat. Feb'y 28, 1874 | List 10 | |
| W. ½ | " | " | " | 320 | | | | | | State selection lieu 16 & 36 | June 12, 1865 | 327 | App'd Mar. 11, 1871—list 20. |
| E. ½ of S. W. ¼ | " | " | " | 80 | State | selec. | Paid for | | | Samuel B. Martin | Feb'y 8, 1883 | 8708 | Patented July 5, 1883. |
| | 21 | | | | | | | | | | | | |
| E. ½ | " | " | " | 320 | | | | | | State selection lieu 16 & 36 | July 12, 1865 | 299 | App'd Sept. 8, '70—list 18. |
| | 33 | | | | | | | | | | | | |
| N. E. ¼ | " | " | " | 160 | | | | | | State selection lieu 16 & 36 | June 12, 1865 | 282 | App'd Sept. 8, '70—list 18. |
| Lots 3 and 4 | | | | | | | | | | W. P. R. R. Co. | Pat. Feb'y 28, 1874 | List 10 | |
| | 35 | | | | | | | | | | | | |
| N. ½ | " | " | " | 320 | | | | | | State selection lieu 16 & 36 | June 12, 1865 | 305 | App'd Sept. 8, '70—list 18. |
| S. ½ | " | " | " | 320 | | | | | | State selection lieu 16 & 36 | June 12, 1865 | 310 | App'd Sept. 8, '70—list 18. |

DEPARTMENT OF THE INTERIOR,
UNITED STATES LAND OFFICE, SAN FRANCISCO, CAL., *February* 5, 1887.

I certify that the foregoing is a full, true, and correct abstract of tract book of township No. 2 south, range No. 1 east, M. D. M., of records of this office so far as the same pertains to sections 13, 15, 21, 33, & 35, with the exception of certain pencil memoranda which do not appear hereon.

A. C. BRADFORD, *Register.*

(Endorsed:) Filed July 26th, 1887. L. S. B. Sawyer, clerk.

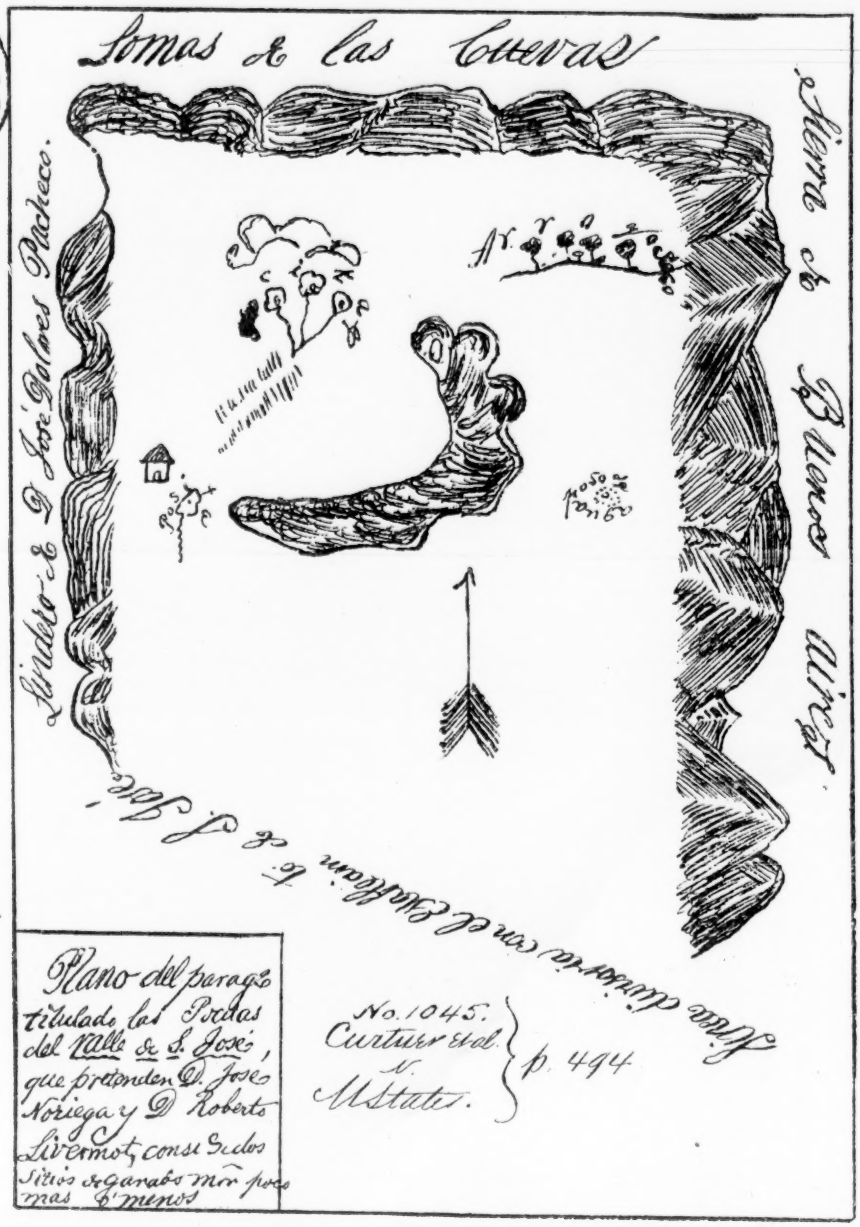
H Hdo 3

# SELLO TERCERO DOS REALES.

Habilitado provicionalmente por la Aduana maritima del puerto de Monterey, en el Departamento de las Californias, para los años de mil ochocientos cuarenta y mil ochocientos cuarenta y uno.

Antonio Maria Osio.

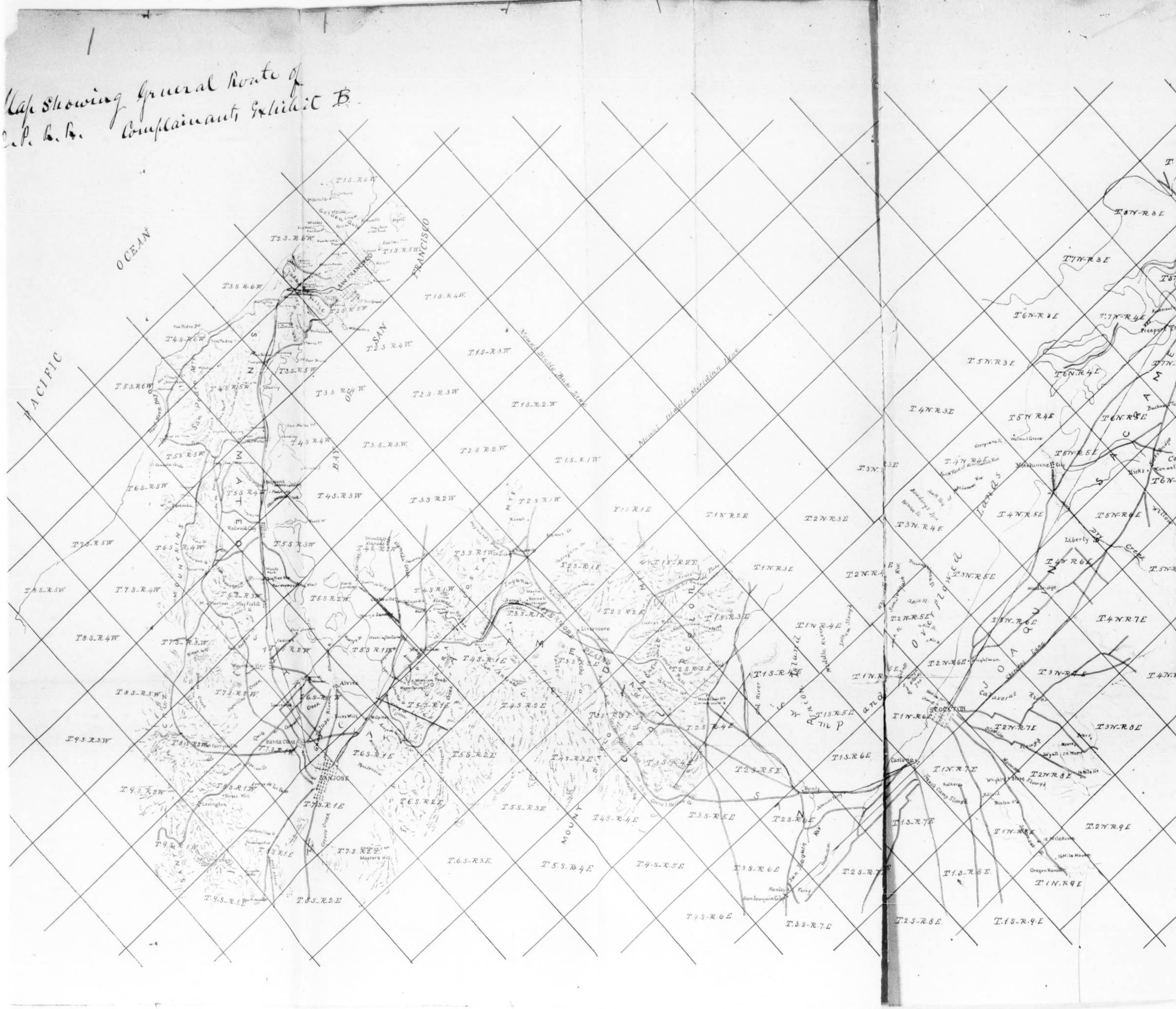
ADA. MARITA. DE MONTE.




No. 1045.
Carturright et al
v.
Alstater.
} p. 494

H 494

Map showing General Route of
C. P. R. R. Complainants Exhibit B.


PACIFIC
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SAN FRANCISCO
SAN FRANCISCO BAY
SAN PABLO BAY
Mount Diablo Base Line
Mount Diablo Meridian Line
SANTA CRUZ MOUNTAINS
DIABLO RANGE
MOUNT HAMILTON RANGE
SAN JOAQUIN
Redwood City
Belmont
Mayfield
Alviso
Santa Clara
SAN JOSE
Lexington
Livermore
Pleasanton
Mission Peak
Mt. Diablo
Martinez
Benicia
Vallejo
Suisun
Napa
Petaluma
Sonoma
Sausalito
Oakland
Alameda
San Leandro
Hayward
Niles
Irvington
Centerville
Mowry
Newark
Alameda Creek
Coyote Creek
Guadalupe River
Los Gatos Creek
Stevens Creek
Permanente Creek
Calabazas Creek
San Francisquito Creek
San Mateo Creek
Pescadero Creek
Arroyo de la Laguna
Arroyo de los Coches
Arroyo Valle
Arroyo Mocho
Arroyo Las Positas
Arroyo del Valle
Arroyo Seco
Arroyo Hondo
Arroyo Honda
Arroyo Bayo
Arroyo Agua Caliente
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Arroyo Cañada

# MAP

OF THE **LINE** OF THE
WESTERN DIVISION OF THE

# CENTRAL PACIFIC RAILROAD COMPANY

OF

## CALIFORNIA

from

## Sacramento to San Francisco

United States of America
State of California

Office of the Central Pacific
Railroad Company of California

We the undersigned, the President, Secretary and Acting Chief Engineer of said Company, do hereby certify that this is a true and complete Map of the line and route of the Western Division of said Company's Road and Telegraph Line, from the City of Sacramento to the City of San Francisco and the Western Terminus thereof, as adopted, located, designated and fixed by the Board of Directors of said Company, a copy of which is on file in the Office of said Company in the City of Sacramento.

In witness our hands and the corporate seal of said Company hereto affixed by order of said Board of Directors this fifth (5th) day of October A.D. 1864.

Leland Stanford President
Secretary

E.H. Miller Jr Secy.

Sam'l S. Montague
Acting Chief Engineer

Seal

Scale 4 miles to 1 inch

Received at the Gen. Land Office
Dec. 8 1864 with letter from
Gov C Gerkam agent dated Dec 7 1864.

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CALIFORNIA

LAKE BIGLER or TAHOE

WESTERN SUMMIT

SIERRA

STATE

EASTERN

NEVADA

SUMMIT

LINE

NEVADA

TERRITORY

PYRAMID LAKE

U. S. Circuit Court, Dist. of Cal.

U. S.
*v.*
CURTNER. } No. 3106.

COMPLAINANT'S EXHIBIT D. S. C. H., Examiner.

Filed July 26, 1887.

L. S. B. SAWYER, *Clerk.*

DEPARTMENT OF THE INTERIOR,
GENERAL LAND OFFICE, *Dec. 2d*, 1882.

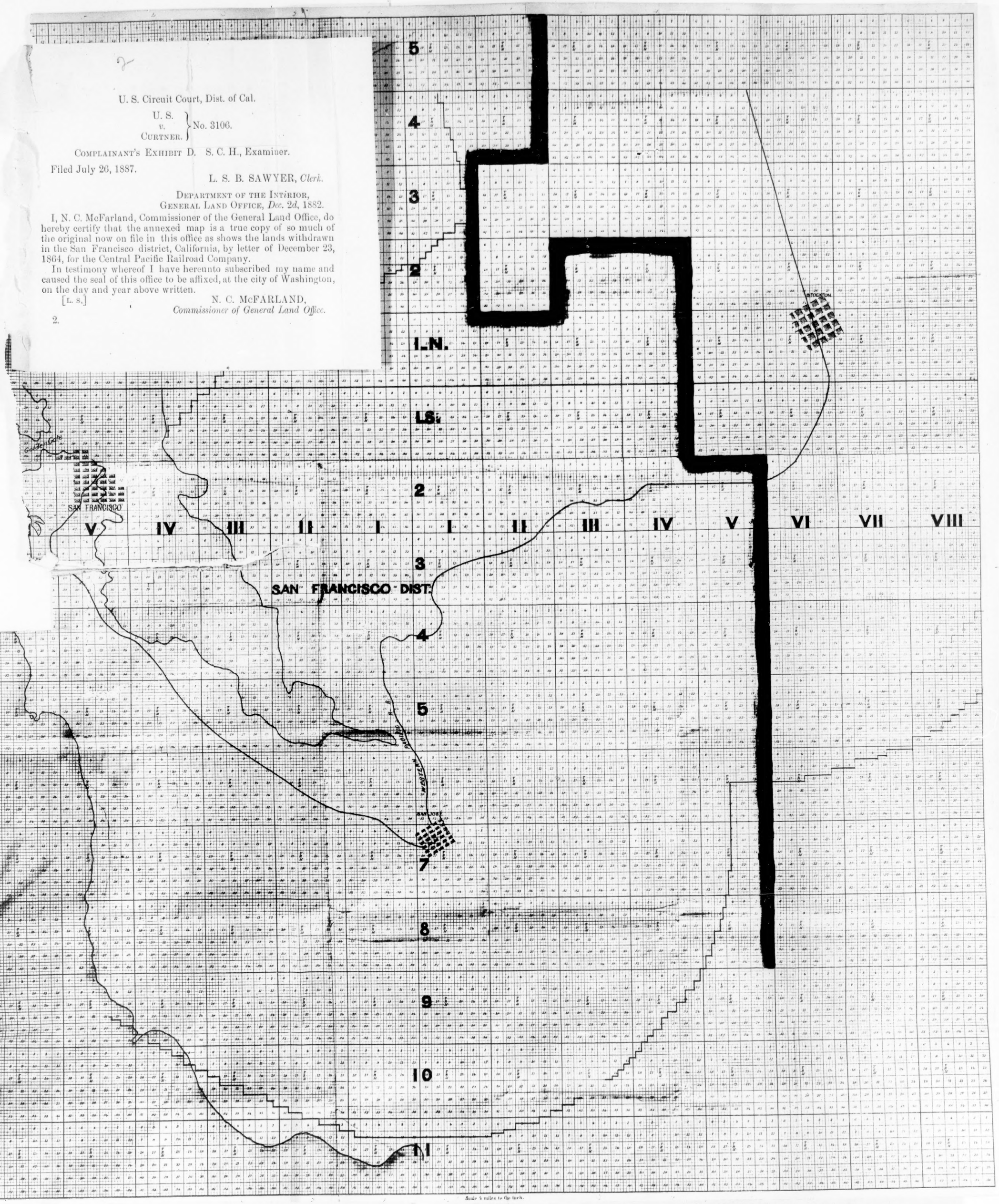
I, N. C. McFarland, Commissioner of the General Land Office, do hereby certify that the annexed map is a true copy of so much of the original now on file in this office as shows the lands withdrawn in the San Francisco district, California, by letter of December 23, 1864, for the Central Pacific Railroad Company.

In testimony whereof I have hereunto subscribed my name and caused the seal of this office to be affixed, at the city of Washington, on the day and year above written.

[L. S.]

N. C. McFARLAND,
*Commissioner of General Land Office.*

2.




Scale 4 miles to the inch.

# Township No. 2 South, Range No. 1 East, Mount Diablo Meridian

Department of the Interior,
UNITED STATES LAND OFFICE,
SAN FRANCISCO, CAL. February 17, 1887

I certify that this is a full true and correct copy of the original now on file in this office

A. C. Bradford
Register.

The odd numbered Sections on this Plat are granted to the Western Pacific Rail Road see letter of instructions dated Dec 2 1864.

| | |
|---|---|
| Aggregate Area of Public Land | 13887.75 Acres |
| Estimated - - Private Grants | 9087.46 " |
| Aggregate | 22975.21 " |

Part of West boundary of Township Colored Red. resurveyed but not charged
Boundaries of Lot No 37 " " " " " "
Section lines lying within boundaries of Private Grants, not charged.

Subdivision lines run with a Variation of 16° E.

| Surveys Designated | By whom surveyed | Date of Contract | Amount of Surveys | When Surveyed |
|---|---|---|---|---|
| Part of West boundary of Township | C.G. Tracy | September 20th 1852 | | 1852 |
| East " " " " " (Red) | E. Dyer | February 25th 1865 | | 1865 |
| Part of South " " " " | Sherman Day | January 31st 1853 | | 1853 |
| East of Mount Diablo lines | E. Dyer | February 25th 1865 | 14 mls 7 chs 10 lks | 1865 |
| Boundaries of Lot No 37 | John La Crate | Cont. November 1st 1857 | | 1859 |
| " " " 38 | E. Dyer | " | | 1862 |
| " " " 39 | Charles T. Healy | " | | 1863 |
| Section Lines | E. Dyer | February 25th 1865 | 34 " 68 " 24 " | March 28th 1865 |

The above Map of Township No 2 South Range No 1 East, Mount Diablo Meridian, is strictly conformable to the field notes of the Surveys thereof, on file in this Office, which have been examined and approved.
Surveyor Generals Office
San Francisco California
April 6th 1865

L. Upton
Surv. Gen. Cal.

Filed in the United States Land Office
San Francisco District 10th of June A.D. 1865
John F. Swift
Register.

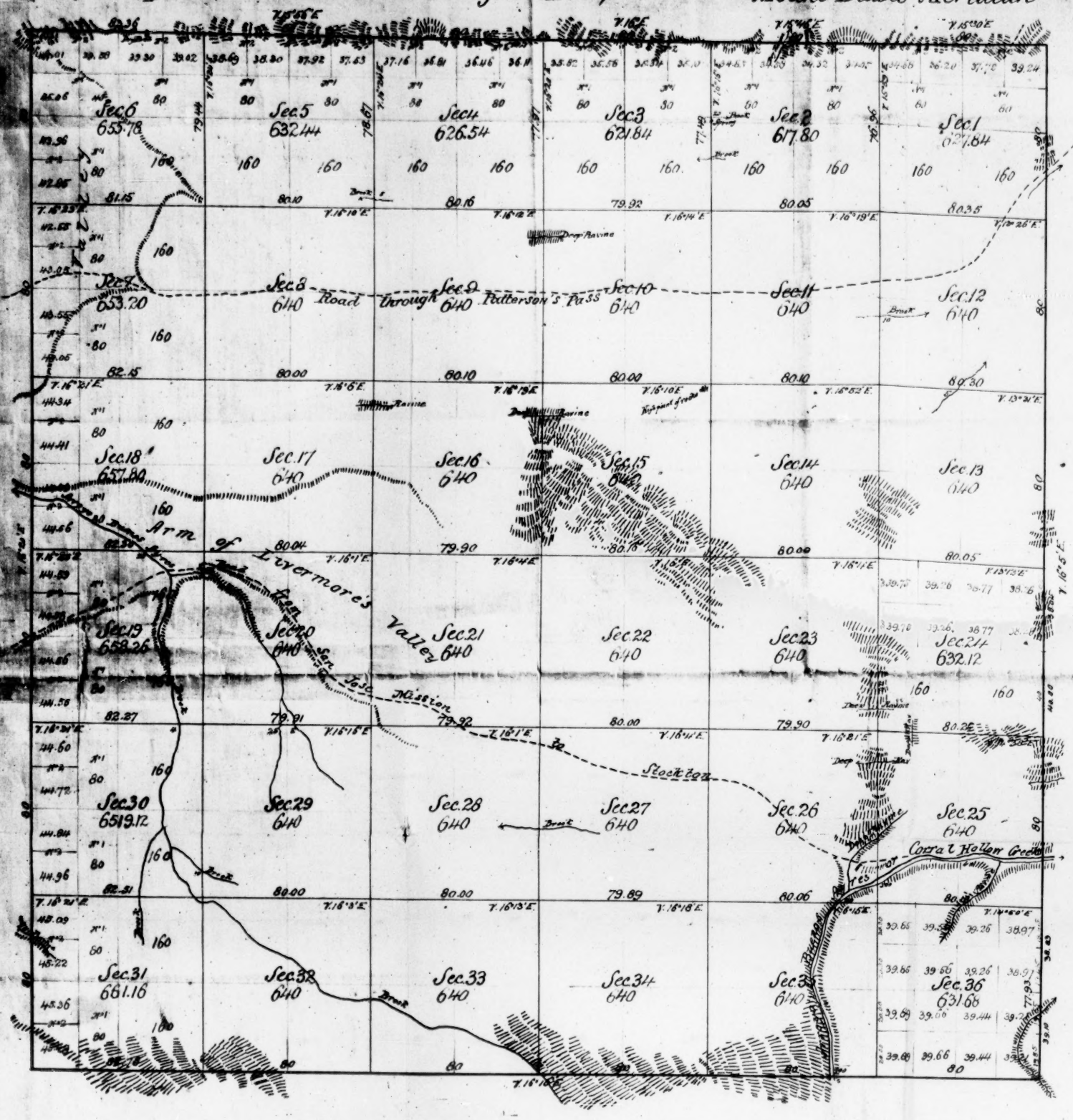
Dist. of Col.

No. 3106

Exhibit W.

Examiner.

Plat of the Survey of the Exterior Boundaries and Subdivisions of Township No. 3 South, Range No. 3 East, Mount Diablo Meridian




| Surveys Designated | By Whom Surveyed | Date of Contract | Amount of Surveys | When Surveyed |
|---|---|---|---|---|
| | | | Mls ths ths | |
| North boundary of Township | Sherman Day | January 31st 1853 | 6. 02. 36 | 1853 |
| Rest of Township lines | E. H. Dyer | October 1st 1861 | 17. 78. 75 | 1862 |
| Section lines | " " " | " " " | 60. 02. 17 | August 27th 1862. |

Dec. 1st 1886

I certify that this is a full true and correct copy of the original now on file in this office

A C Bedford
Register

A full true and correct Copy of the Original Map of Township No 3 South, Range No 3 East of Mount Diablo Meridian on file in this office
Surveyor General's Office,
San Francisco, California,
June 4th 1869.

Sherman Day
Surv. Gen. Cal.a

Seal.

June 23 1871 Suspension removed from all lands outside of confirmed limits of the Los Positas Rancho by Com.r Letter of this day rec.d of June 14th 1871

Sections 6 & 7 Suspended June 4 1869

Suspension removed from all the Lands in this Tp. except Secs 6 & 7 Jany 29. 1870
Land within exterior limits of Rancho Los Positas confirmed by Com.r Gen.l Land Office under date of June 30 1870

Filed in the U. S. Land Office at San Francisco this 4th day of June 1869

H.G. Rollins Register

Aggregate Area of Public Lands 23 055. 58 Acres.

Meridian lines not otherwise noted run at a Variation of 16° 20' East.

The above Map of Township No 3 South, Range No 3 East, (Mount Diablo Meridian) is strictly conformable to the field notes of the Surveys thereof on file in this Office, which have been examined and approved.
Surveyor General's Office
San Francisco, California,
December 24th 1862

E. F. Beale.
Surv. Gen. Cal.a

# MAP

of the

*Iniatory Survey*

OF THE

*Rancho de las Positas.*

CLAIMED BY

Robert Livermore,

and confirmed by the board of Land Commissioners

Containing 2064 Acres

Surveyed by

Wm J. Lewis Dep Surv

under instructions from the

United States Surveyor General

Scale 20 chains to the inch

Lomas de las Cuevas

Arroyo de los Alamos

Arroyo Cayetano

Rancho of Jose Dolores Pacheco.

Sierra

Conglomerate Rocks

Grove

Section Stake

Alkali Land

Good Pasture

Buenos Ayres

Stockton

Township Line 12 Miles South of Monte Diablo.

San Jose to

Lake

Spring

Moist valley rich alluvium

Arroyo de las Positas

Vineyard

Garden

Robert Livermore

Road from

Oak R.L.

Line of the Rancho

Dry Barren Plain covered with Quartz pebbles

Lone Hill

Arroyo Alcho

Corral

Oak Grove

Arroyo de Buenos Ayres

Hotel

Factory

Store

Arroyo de las Positas

Arroyo de Buenos Ayres

Spring

Garden

Section Stakes

I hereby certify this to be a full, true and correct copy of the original Map of the iniatory survey of the Rancho de las Positas, claimed by Robert Livermore, as executed by William J. Lewis dep. surv. under instructions from J.C. Hays, Surv. Genl. dated April 5th 1854. the field notes of which are of record in this office.

Witness my hand and official seal

U.S. Surveyor-General's Office.

San Francisco, California

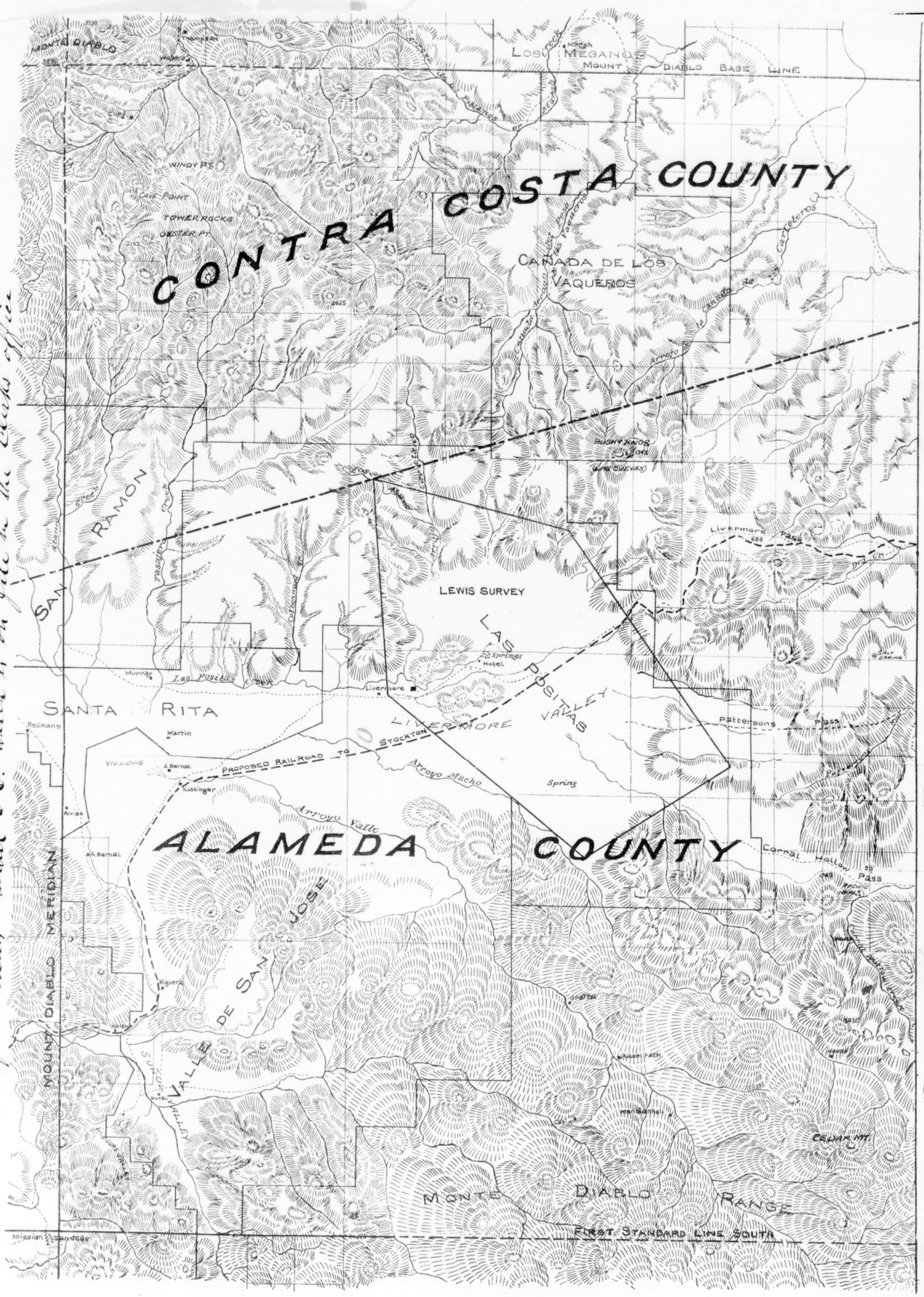
1859.

Wm H. Brown

U.S. Surv. Genl., Cal.

6

Portion of Prof. Whitney's Geological and Topographical Map of Contra Costa County, Published by C. C. Allen in the Records Office



No 3166.
55
Chk

7

# Compiled Map.

R. 1 E. | R. 2 E. | R. 3 E.

T. 2 S. Mount Diablo Meridian

T. 3 S.

Rancho Cañada de los Baqueros

Public Land

Rancho San Ramon (Amador)

Rancho of Jose Dolores Pacheco

Lomas de los Cerros

Rancho Santa Rita (Dolores Pacheco)

Rancho Valle de San Jose

Public Land

Scale 1 inch to the mile

U.S. Surveyor General's Office for California
San Francisco, Cal.ª

This map of the several official surveys of the Rancho Las Positas is correctly compiled from the official records of this office, and shows:

1st. By the black boundary lines; and by the full topography delineated on said map, the initiatory survey of said Rancho made by Wm. J. Lewis U.S. Dep. Surr. in May, 1854.

2nd. By the red boundary lines, the survey of said Rancho by E.H. Dyer, U.S. Dep. Surr. made in October, 1865

3d. By the blue boundary lines, the survey of said Rancho by E.H. Dyer, U.S. Dep. Surr. made in March, 1869, and being the survey upon which a patent of the United States of America was issued for said Rancho

The tracts colored brown on this map, are Sections 13, 35; E½ Sec. 21; W½ and N.E¼ Sec. 15; and N.E¼ Sec. 33, T. 2 S., R. 1 E., and fractional N½ Sec. 19 outside Lewis Survey; S½ of S.W¼ and S.W¼ of S.E¼ of Sec. 17; and W½ of Sec. 21 T. 3 S. R. 3 E. Mount Diablo Meridian.

In witness whereof I have hereunto Signed my name, and caused my official seal to be affixed this 28th day of January 1887

R.G. Hammond Jr
U.S. Surr. Genl. Cal.

COMPLAINANT'S EXHIBIT K K.

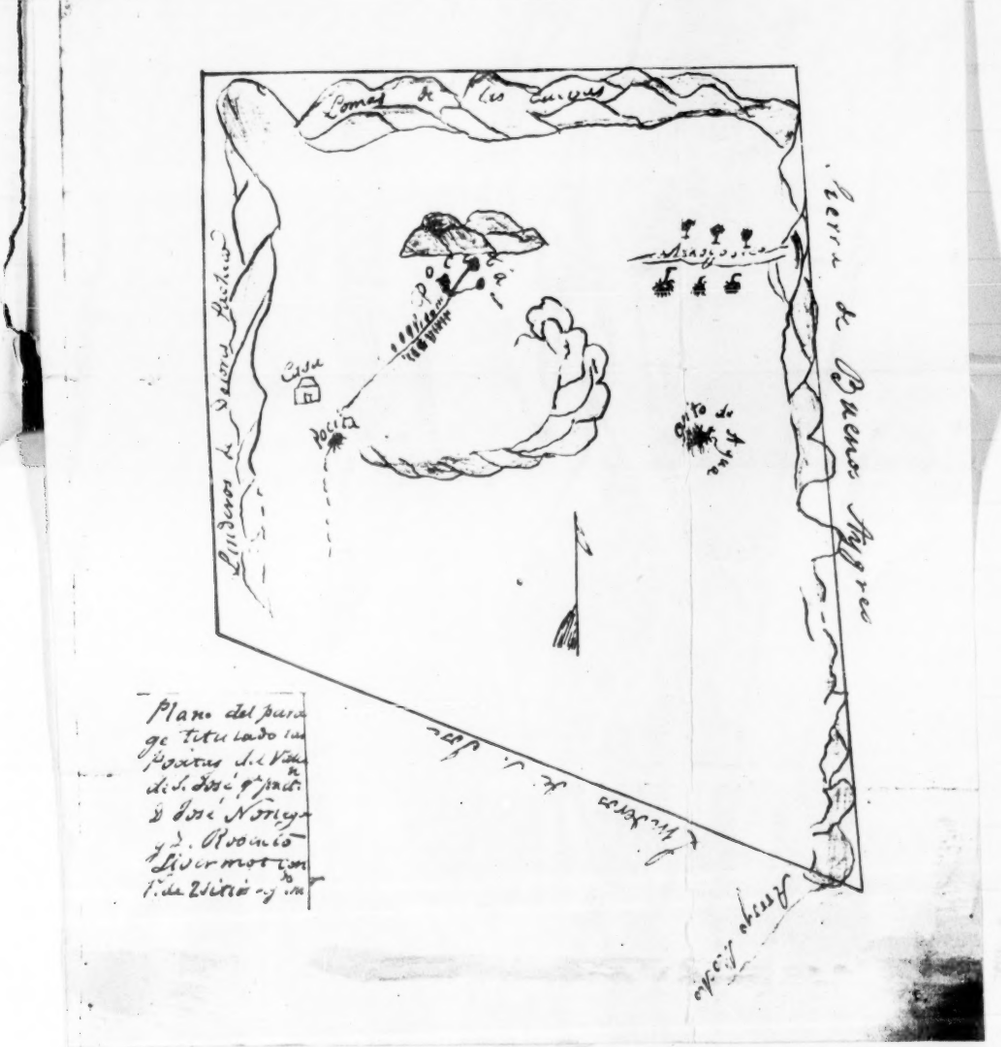
OFFICE OF THE SURVEYOR GENERAL
OF THE UNITED STATES FOR CAL.

I, R. P. Hammond, Jr., surveyor general of the United States for the State of California, & as such having in my office and in my charge & custody a portion of the archives of the former Spanish and Mexican territory or department of Upper California, as also the papers of the late board of commissioners to ascertain and settle the private land claims in California, by virtue of the power vested in me by law, do hereby certify that the preceeding and hereunto annexed page of tracing papers, numbered 129, exhibits a true, full, and correct copy of the original diseño or map contained in expediente No. 129, entitled "expediente instituted by the Citizens José Noriega and Roberto Livermat soliciting the place named Las Pocitas of the Valley of San José;" which said diseño is the original of which map "C," filed in case No. 77, José Noriega & Rob't Livermore, Las Pocitas, purports to be a copy and now on file in this office and in my custody; that I have carefully compared the same with said original, and that the same is a correct transcript therefrom and of the whole of such original.

In testimony whereof I have hereunto signed my name
[L. S.] officially and caused my seal of office to be affixed, at the city of San Francisco, this thirtieth day of December, 1886.

R. P. HAMMOND, JR.,
*U. S. Surveyor General for California.*

3.



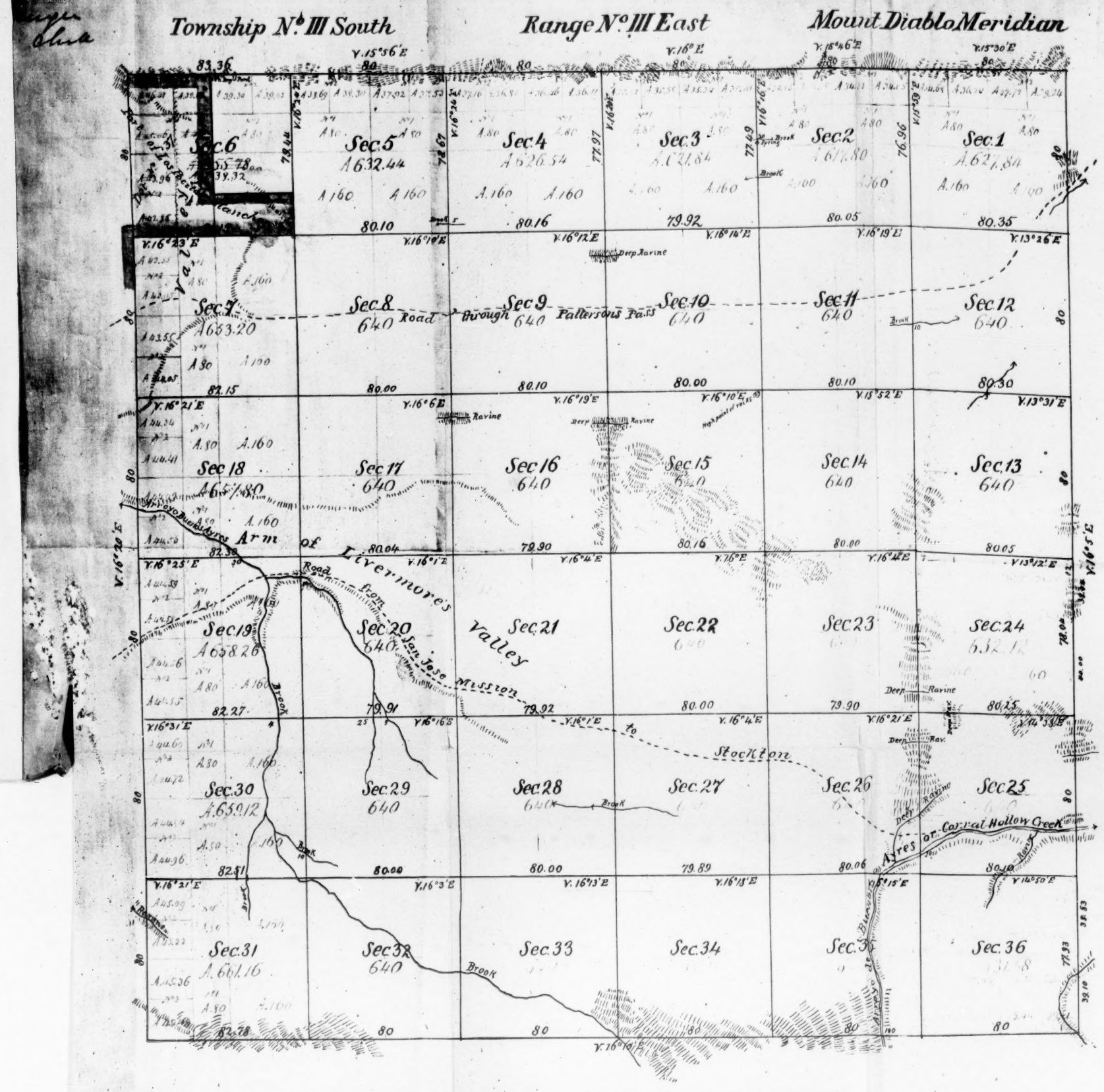
8

Photograph of Las Positas as shown by "Diseño" grant made to José Noriega & Robt. Livermore in 1839.

U. S. Circuit Court, Dist. of Cal.
2655.
v.
Cartner
No. 3106
Complainant's Exhibit KK
Examiner.

R. J. B. Langan
Clerk

Plano del Rancho titulado las Positas de la Viuda de D. José Maria Pico y Don José Noriega y D. Roberto Livermore con la Viuda y Hijos




| Surveys Designated. | By Whom Surveyed | Date of Contract | Amount of Survey | When Surveyed |
|---|---|---|---|---|
| North boundary of Township | Sherman Day | January 31st 1853 | Mls. Chs. Lks. 6. 03. 36 | 1853 |
| Rest of Township lines | E. F. Dyer | October 1st 1861 | 17. 78. 75 | 1862 |
| Section lines | " " " | | 60. 02. 17. | August 27th 1862 |
| Boundaries of Lot No 37 | " " " | Instructions March 2d 1869 | | 1869 |

I hereby certify this to be a full, true and correct copy of the original map on file in this Office.
Witness my hand, and Official Seal.
Surveyor Generals Office
San Francisco California
June 9th 1886

R. H. Hammond Jr.
Surv. Genl. Cal.

| | | |
|---|---|---|
| Aggregate Area of Public land | 22638.12 | Acres |
| Estimated " " Lot No 37 (Private Grant) | 417.46 | " |
| Aggregate | 23055.58 | " |

Aggregate Area of Public lands 23 055. 58 Acres

Meridian lines not otherwise noted ran at a Variation of 16° 20' East

The above Map of Township No 3 South, Range No 3 East (Mount Diablo Meridian) is strictly conformable to the field notes of the Surveys thereof on file in this Office, which have been examined and approved.
Surveyor Generals Office
San Francisco, California
Decembr 24th 1862
June 26. 1871.

J. R. Haraszthy

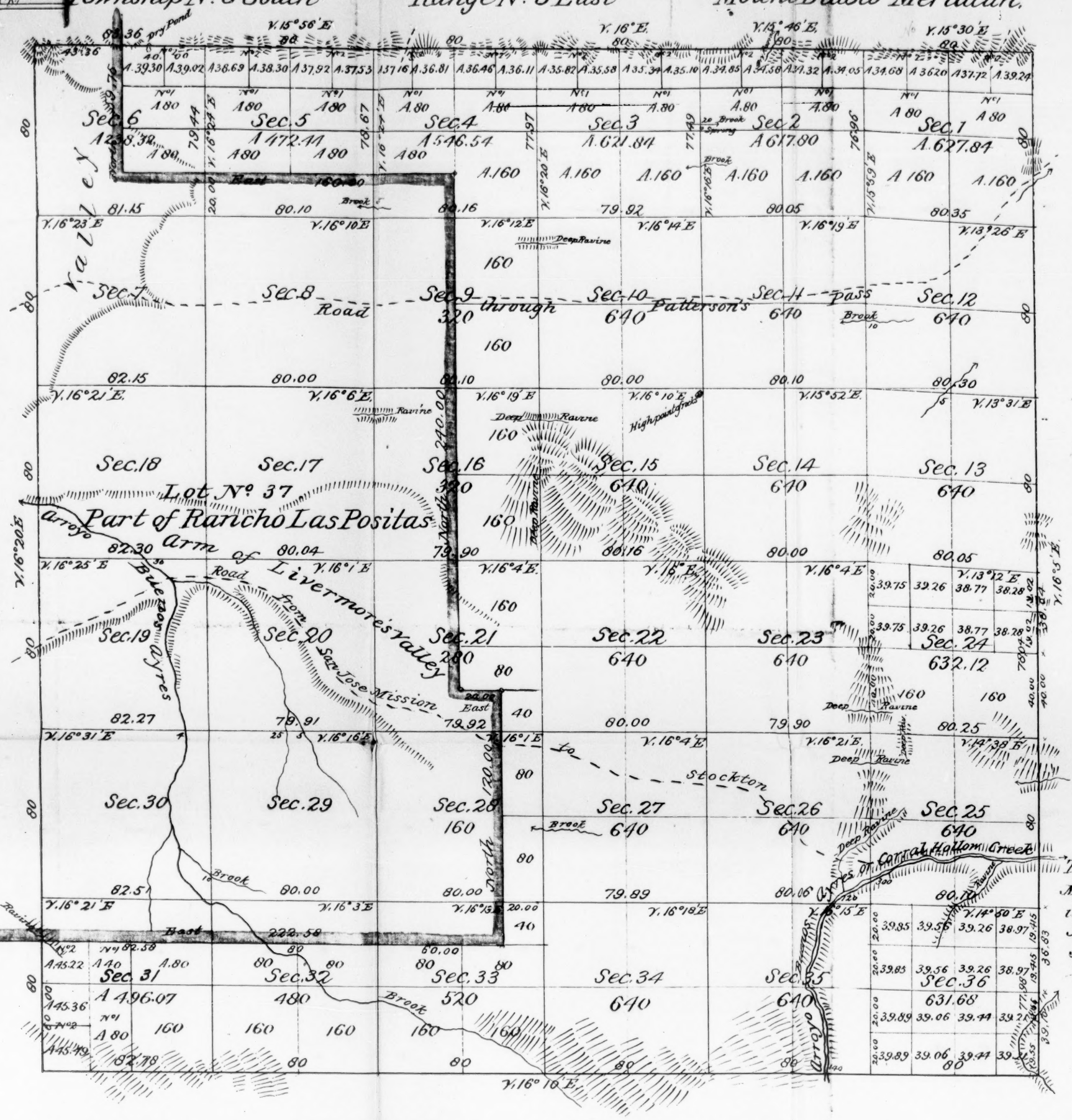
E. F. Beale
Surv. Genl. Cal.

U.S. Circuit Court, Dist. of Cal.
No. 5.
v.
Curtner
No. 3106.
Respondent's Exhibit 9.
Examined

Filed July 26. 1887
L.J.B Clerk

10

# Township No. 3 South Range No. 3 East Mount Diablo Meridian.




| Surveys Designated | By Whom Surveyed | Date of Contract | Amount of Surveys | When Surveyed |
|---|---|---|---|---|
| North boundary of Township | Sherman Day | January 31st 1853 | 6 mls 3 chs 36 lks | 1853 |
| Rest of Township lines | E.H. Dyer | October 1st 1861 | 17 " 78 " 75 " | 1862 |
| Section lines | " " " | " " " | 60 " 02 " 17 " | August 27th 1862 |
| Boundaries of Lot No. 37 | " " " | instructions September 21st 1865 | | 1865 |

Aggregate Area of Public land 15,284.65 Acres
" " " Lot No. 37 7.770.93 "
Aggregate 23.055.58 "

Meridian lines not otherwise noted run at a Variation of 16° 20' East.

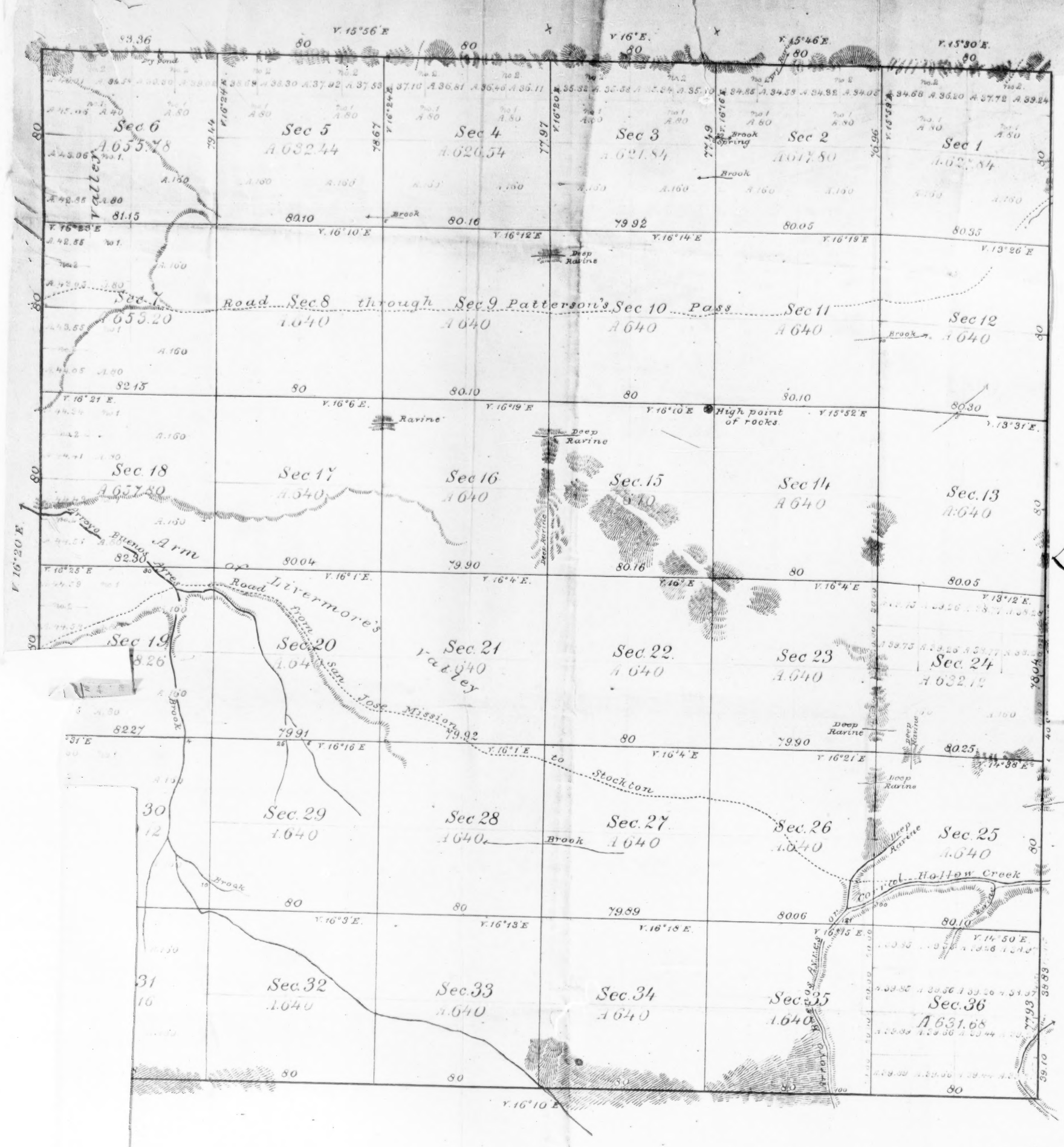
The above amended map of Township No. 3 South, Range No. 3 East, (Mount Diablo Meridian,) is strictly conformable to the field notes of the Surveys thereof on file in this Office, which have been examined and approved.
Surveyor General's Office,
San Francisco California,
December 18th 1865.

Surv. Gen'l Cal.

I hereby certify this to be a full true and correct copy of the original map on file in this Office, Witness my hand and official seal,
U.S. Surveyor-General's Office.
San Francisco, California
February 3rd 1887.

U.S. Surv. Gen'l Cal

# Township No. III South, Range No. III East, Mount Diablo Meridian




| Designated | By whom surveyed | Date of Contract | Amount of Surveys | When surveyed |
|---|---|---|---|---|
| dary of Township<br>wnship lines<br>es | Sherman Day<br>E.H. Dyer<br>" " " | January 31st 1853<br>October 1st 1861<br>" " " | 6 miles 03 chs. 36 lks<br>17 . 78 . 75 "<br>60 . 02 . 17 " | 1853<br>1862<br>August 27th 1862 |

Received with Surveyor Generals letter of December 29th 1862.

Department of the Interior Washington Mch. 3rd 1887

I Wm A J Sparks Commissioner of the General Land Office do hereby certify that the annexed tracing of the official plat of Survey of Township 3 South of Range 3 East M. D. M. California is a true and literal exemplification of the official plat of said Township on file in this office.

In testimony whereof I have hereunto subscribed my name and caused the seal of this office to be affixed at the city of Washington on the day & year above written.

Wm A J Sparks

Commissioner of General Land Office

(Endorsed)
U.S. Circuit Court Dist. of Cal
U.S. v Cartter No 3106 - Respondent Exhibit 25
Filed July 26th 1887 L.S.B. Sawyer Clerk

DEPARTMENT OF THE INTERIOR,
GENERAL LAND OFFICE,
WASHINGTON, D. C., *March 3rd*, 1887.

I, Wm. A. J. Sparks, Commissioner of the General Land Office, do hereby certify that the annexed tracing of the official plat of survey of township 3 south, of range 3 east, M. D. M., California, is a true and literal exemplification of the official plat of said township on file in this office.

In testimony whereof I have hereunto subscribed my name and caused the seal of this office to be affixed, at the city of Washington, on the day and year above written.

[L. S.]

WM. A. J. SPARKS,
*Commissioner of General Land Office.*

(Endorsed:) U. S. circuit court, dist. of Cal. U. S. *v.* Cartner. No. 3106. Respondents' Exhibit 25. S. C. H., examiner. Filed July 26th, 1887. L. S. B. Sawyer, clerk.

4.

Merid. East

The above Map of Township No. 3 South, Range No. 3 East Mount Diablo Meridian is strictly conformable to the field notes of the Survey thereof on file in this Office, which have been examined and approved.
Surveyor Generals Office
San Francisco California
December 24th. 1862

E. F. Beale,
Surv. Genl. Cal.

# Township No. III South, Range No. III East, Mount Diablo Meridian

Received at Surveyor Generals Office
of December 24th 1862.

Department of the Interior Washington Mch. 3rd 1887

I Wm A J Clarke Commissioner of the General Land Office
do hereby certify that the annexed tracing of the official plat
of Survey of Township 3 South of Range 3 East M. D. M. California
is a true and literal exemplification of the official plat of
said township on file in this office.

In testimony whereof I have hereunto subscribed my name
and caused the seal of the City of
Washington to be affixed.

Endorsed
U.S. C
U.S.
Filed

al Land Office

Ag

Meridian lines not otherwise noted, run with a Variation of 16° 20' East

The above Map of Township No. 3 South, Range No. 3 East Mount Diablo Meridian is strictly conformable to the field notes of the Survey thereof on file in this Office, which have been examined and approved.
Surveyor Generals Office
San Francisco California
December 24th. 1862

E. H. Beale,
Surv. Genl. Cal.

| Designated | By whom surveyed | Date of Contract | Amount of Surveys | When surveyed |
|---|---|---|---|---|
| dary of Township<br>nship lines<br>ines | Sherman Day<br>E.H. Dyer<br>" " " | January 31st 1853<br>October 1st 1861<br>" " " | 6 miles 03 chs. 36 lks<br>17 . 78 . 75 "<br>60 . 02 . 17 . | 1853<br>1862<br>August 27th 1862. |

U. S. Circuit Court, Dist. of Cal.
26. 5.
vs.
Carlton
No. 3106
Respondent's Exhibit 26.
[illegible] Examiner.

Filed Jul 26 1887
Adv Dangerfield Clerk

12

1

# Township No III South

# Range No III East

# Mount Diablo Meridian

Sec 6 A 238.32 | Sec 5 A 632.44 | Sec 4 A 626.54 | Sec 3 A 621.84 | Sec 2 A 617.60 | Sec 1 A 627.84

Sec 7 A 653.20 | Sec 8 640 | Sec 9 640 | Sec 10 640 | Sec 11 640 | Sec 12 640

Sec 18 | Sec 17 640 | Sec 16 640 | Sec 15 640 | Sec 14 640 | Sec 13 640

Sec 19 A 658.28 | Sec 20 640 | Sec 21 640 | Sec 22 640 | Sec 23 640 | Sec 24 632.12

Sec 30 A 659.12 | Sec 29 640 | Sec 28 640 | Sec 27 640 | Sec 26 640 | Sec 25 640

Sec 31 A 661.16 | Sec 32 640 | Sec 33 640 | Sec 34 640 | Sec 35 640 | Sec 36 631.68

Arm of Livermores Valley

San Jose Mission

Stockton

Old Contra Costa Road

Deep Ravine

Brook

Ranchos

Lot No 2 of Los Positas

Road Through Patterson's Pass

Creek

| Surveys Designated | By whom Surveyed | Date of Contract | Amount of Surveys | When Surveyed |
|---|---|---|---|---|
| North boundary of Township | Sherman Day | June 31st 1853 | m/s 6 chs 03.36 | 1853 |
| Rest of Township lines | C. H. Dyer | October 7th 1861 | 17. 78.75 | 1862 |
| Section lines | " " " | | 60. 02.17 | August 2nd 1862 |
| Boundaries of Lot No 37 | " " " | Instructions March 2d 1869 | | 1869 |

March 8 1887

I certify that this is a full, true and correct copy of the original now on file in this Office

A. C. Bradford
Register

| | |
|---|---|
| Aggregate area of Public land | 22638.12 acres |
| Estimated " " Lot No 37 (Private Grant) | 417.46 " |
| Aggregate | 23055.58 " |

Filed in U. S Land Office at San Francisco, California, on this 1st day of July, 1871.

Hel Rollins
Register

Meridian lines not otherwise noted run at a Variation of 16° 20' East

The above map of Township No 3 South Range No 3 East (Mount Diablo Meridian) is strictly conformable to the field notes of the surveys thereof on file in this office, which have been examined and approved
Surveyor Generals Office
San Francisco California
June 26th 1871

J. R. Haraenbergh
Surv. Gen. Cal

U.S. Circuit Court, Dist. of Cal.
26 S.
Circuit
Respondent's Exhibit 29
No. 3106
Examiner

Filed July 26 1887
[illegible]
Clerk

3

# PLAT
of the
# RANCHO LAS POCITAS
finally confirmed to
Jose Noriega and Jose Livermore Exr. et al
Surveyed under instructions from the
U. S. SURVEYOR GENERAL
by
E H Dyer Deputy Surveyor
October 1865
Containing 43011 3/100 Acres
Scale 80 Ch.s to an inch
Variation 15° 50' East

Boundaries

| Nº | Course | Distance | Nº | Course | Distance |
|---|---|---|---|---|---|
| 1 | South | 176.42 | 15 | West | 20.00 |
| 2 | East | 420.06 | 16 | South | 80.00 |
| 3 | North | 120.00 | 17 | West | 20.00 |
| 4 | West | 20.00 | 18 | South | 220.00 |
| 5 | North | 240.00 | 19 | East | 120.00 |
| 6 | West | 160.00 | 20 | South | 40.00 |
| 7 | North | 153.75 | 21 | East | 80.00 |
| 8 | West | 62.62 | 22 | South | 40.00 |
| 9 | North | 120.00 | 23 | East | 40.00 |
| 10 | West | 100.00 | 24 | North | 80.00 |
| 11 | North | 100.00 | 25 | East | 38.09 |
| 12 | West | 113.27 | 26 | S. 2°50' E | 111.00 |
| 13 | North | 20.00 | 27 | S. 51¾ E | 279.00 |
| 14 | S. 89¾ W | 479.61 | | | |

Rancho Cañada de los Baqueros
Rancho San Ramon (Amador)
Rancho Santa Rita (Dolores Pacheco)
Rancho Valle de San Jose
Public Land
LAS CUEVAS
LIVERMORE'S VALLEY
RANGE OF PUBLIC MOUNTAINS
SIERRA DE LA BUENOS AYRES
Rolling Hills
Lot Nº 41
Lot Nº 38
Lot Nº 36
Lot Nº 37.
T. 2 S. R. 1 E.
T. 2 S. R. 2 E.
T. 2 S. R. 3 E.
T. 3 S. R. 1 E.
T. 3 S. R. 2 E.
Sec 12
Sec 7
Sec 13
Sec 18
Sec 30
Sec 31
Sec 32
Sec 33
Sec 5
Sec 4
Sec 16
Sec 28
240.00
160.00
42.62
60.00
Arroyo Mocho

I hereby certify this to be a full, true and correct copy of the original Map on file in this Office. Witness my hand and Official Seal
Surveyor Generals Office
San Francisco California R. H. Lammon, Jr.
June 9th 1886
Surv. Genl. Cal.

The field notes of the Survey of the Rancho Las Pocitas, from which this Plat has been made out, have been examined and approved, and are on file in this Office.
U. S. Surveyor General's Office
San Francisco California
~~November 6th 1866~~
February 8th 1867.

L Upson
U. S. Surv. Gen Cal.

14

RESPONDENT'S EXHIBIT 46.

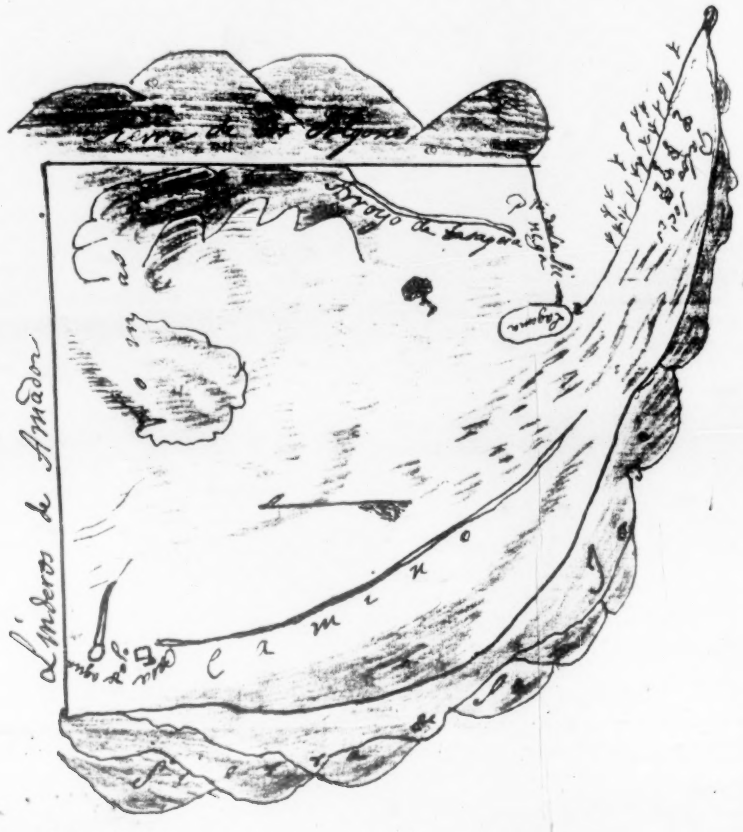
OFFICE OF THE SURVEYOR GENERAL OF THE
UNITED STATES FOR CALIFORNIA.

I, —— ——, surveyor general of the United States for the State of California, and as such having in my office and in my charge and custody a portion of the archives of the former Spanish and Mexican territory or department of Upper California, as also the papers of the late board of commissioners to ascertain and settle the private land claims in California, by virtue of the power vested in me by law, do hereby certify that the preceeding and hereunto annexed page of tracing paper, numbered 128, exhibits a true, full, and correct copy of the original diseño found in expediente No. 128 & filed in case No. 60, José Dolores Pacheco Santa Rita, as the same appears designated on the docket of the aforesaid commissioners and now on file in this office and in my custody; that I have carefully compared the same with said original, and that the same is a correct transcript therefrom and of the whole of such original.

In testimony whereof I have hereunto signed my name officially and caused my seal of office to be affixed, at the city of San Francisco, this 17th day of August, 1886.

[L. S.] R. P. HAMMOND, JR.,
*U. S. Surveyor General for California.*

5.



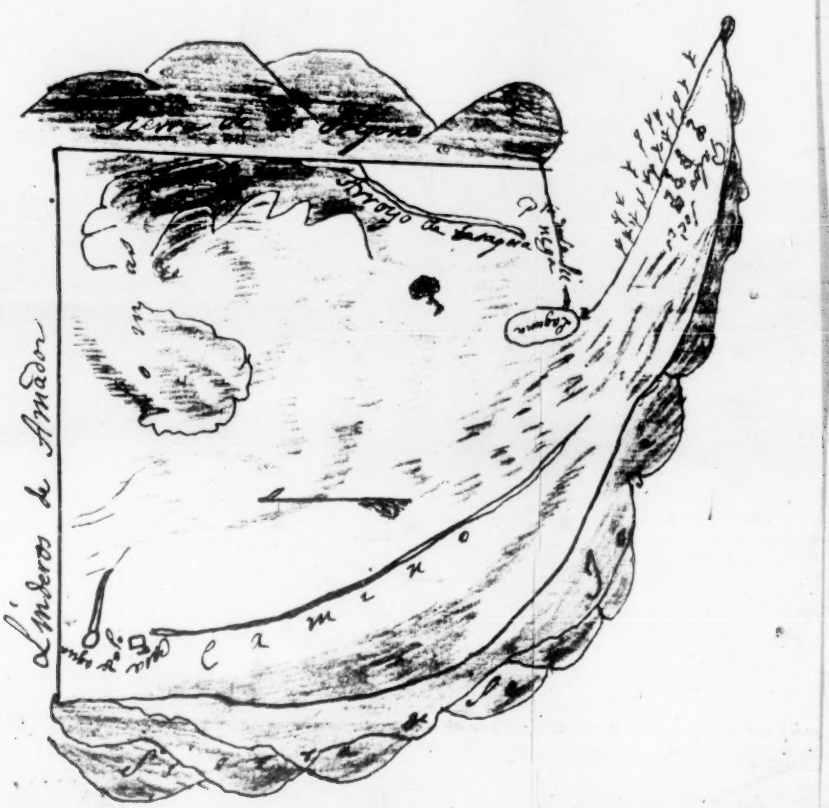

5

14

Photograph of Diseño of Santa Rita grant made to Don José Dolores Pacheco in 1839

U. S. Circuit Court, Dist. of Cal.
No. 26. E.
v.
Gartner
No. 3156
Respondent's Exhibit 46.
Examiner.

Filed July 26. 1887
J. J. B. Deuprey
Clerk



RESPONDENT'S EXHIBIT 47.

DEPARTMENT OF THE INTERIOR,
GENERAL LAND OFFICE,
WASHINGTON, D. C., *April* —, 1886.

I, Wm. A. J. Sparks, Commissioner of the General Land Office, do hereby certify that the annexed copy is a true and literal exemplification of a map of the Western Pacific railroad from San Jose to Sacramento, California, filed in this office on the 1st day of February, A. D. 1870, and of every part thereof, and now remaining on file herein.

In testimony whereof I have hereunto subscribed my name and caused the seal of this office to be affixed, at the city of Washington, on the day and year above written.

[L. S.] WM. A. J. SPARKS,
*Commissioner of General Land Office.*

(Endorsed:) Map of Western Pacific R. R. as located & constructed from San José to Sacramento, Cal. Filed in the General Land Office Feb'y 1st, '70. See letter from Sec. of Interior dated Feb'y 1st, '70. H. 89, 655. U. S. circuit court, dist. of Cal. U. S. *v.* Cartner. No. 3106. Respondents' Exhibit 47, S. C. H., examiner. Filed July 26th, 1887. L. S. B. Sawyer, clerk.

6.

Interior dated Feby. 1st/70 H. 89 655

U.S. Circuit Court Dist of Cal

U.S. v Cartner No 3106

Respondent's Exhibit 47

S.C.H. Examiner

Filed July 26th 1887

L.S.B. Sawyer clerk

El Paso

Rio de los Americanos

Omochumnes

Cosumnes

Mokelumnes

San Joaquin

Pacific

Western

Central

Visalia

Fresno

BRIGHTON

FLORIN

ELK GROVE

COSUMNES

DOCKTON

T.VIII N.R.IV E.

T.VIII N.R.V E.

T.VIII N.R.VI E.

T.VIII N.R.VII E.

T.VIII N.R.VIII E.

T.VII N.R.IV E.

T.VII N.R.V E.

T.VII N.R.VI E.

T.VII N.R.VII E.

T.VII N.R.VIII E.

T.VI N.R.V E.

T.VI N.R.VI E.

T.VI N.R.VII E.

T.VI N.R.VIII E.

T.V N.R.V E.

T.V N.R.VI E.

T.V N.R.VII E.

T.V N.R.VIII E.

T.IV N.R.V E.

T.IV N.R.VI E.

T.IV N.R.VII E.

T.IV N.R.VIII E.

T.III N.R.V E.

T.III N.R.VI E.

T.III N.R.VII E.

T.III N.R.VIII E.

T.II N.R.VI E.

T.II N.R.VII E.

T.II N.R.VIII E.

T.I N.R.VI E.

T.I N.R.VII E.

T.I N.R.VIII E.

# Map of the
# WESTERN PACIFIC RAILROAD,
## showing its Connections with the
## U. S. LAND SURVEYS.

SCALE 2 MILES TO 1 INCH.

Engineers Office W. P. R. R.
Sacramento, January 3d 1870.

I, S. S. Montague, Chief Engineer of the Western Pacific Railroad Company hereby certify that this map is a correct delineation of the line of the Western Pacific Railroad as located and constructed between the City of San José and the point of Junction with the Central Pacific Railroad near Sacramento, and the connections of the said Railroad line with the lines of the U. S. land surveys are correctly shown thereon.

Jan. 3d 1870 S S M

Sam'l S. Montague
Chief Engineer Western Pacific R. R. Co.

Sworn to and subscribed before me, W. B. C. Brown, County Clerk of Sacramento County California, and ex-officio clerk of the sixth District Court – the same being a court of record – this 3d day of January 1870.
As witness my hand and the seal of the said court.

Seal

W. B. C. Brown
County Clerk and ex-officio clerk of said court.

Pacific. E. T. Morris.

Mount Diablo
T. 1 S. R. 1 W.
T. 1 S. R. 1 E.
T. 1 S. R. 2 E.
T. 1 S. R. 3 E.
Canada de los Vaqueros
T. 1 S. R. 4 E.
T. 1 S. R. 5 E.
T. 1 S. R. 6 E.
T. 1 S. R. 7 E.
T. 1 S. R. 8 E.
San Ramon
T. 2 S. R. 1 W.
T. 2 S. R. 1 E.
T. 2 S. R. 2 E.
T. 2 S. R. 3 E.
Las Positas
T. 2 S. R. 4 E.
T. 2 S. R. 5 E.
T. 2 S. R. 6 E.
T. 2 S. R. 7 E.
T. 2 S. R. 8 E.
Santa Rita
T. 3 S. R. 1 W.
T. 3 S. R. 1 E.
T. 3 S. R. 2 E.
T. 3 S. R. 3 E.
T. 3 S. R. 4 E.
T. 3 S. R. 5 E.
T. 3 S. R. 6 E.
T. 3 S. R. 7 E.
T. 3 S. R. 8 E.
Valle de San José
T. 4 S. R. 1 W.
T. 4 S. R. 1 E.
T. 4 S. R. 2 E.
T. 4 S. R. 3 E.
T. 4 S. R. 4 E.
T. 4 S. R. 5 E.
T. 4 S. R. 6 E.
T. 4 S. R. 7 E.
T. 4 S. R. 8 E.
T. 5 S. R. 1 W.
Agua Caliente
T. 5 S. R. 1 E.
T. 5 S. R. 2 E.
T. 5 S. R. 3 E.
T. 5 S. R. 4 E.
T. 5 S. R. 5 E.
T. 5 S. R. 6 E.
T. 5 S. R. 7 E.
T. 5 S. R. 8 E.
Tularcitos
Arroyo de los Esteros
Milpitas
T. 6 S. R. 1 W.
T. 6 S. R. 1 E.
T. 6 S. R. 2 E.
T. 6 S. R. 3 E.
T. 6 S. R. 4 E.
T. 6 S. R. 5 E.
T. 6 S. R. 6 E.
T. 6 S. R. 7 E.
T. 6 S. R. 8 E.
Arroyo de los Coches
Unistac
Rincon de la Piedra
Pala
Santa Clara
San José
T. 7 S. R. 1 W.
T. 7 S. R. 1 E.
T. 7 S. R. 2 E.
T. 7 S. R. 3 E.
T. 7 S. R. 4 E.
T. 7 S. R. 5 E.
T. 7 S. R. 6 E.
T. 7 S. R. 7 E.
T. 7 S. R. 8 E.
Quito
Los Coches
San Juan Bautista
Coyote Creek
Alameda Creek
San Ramon Valley
Danville
Livermore Pass
Altamont
Midway
Ellis
Santa Clara
Patterson's Pass
Corral Hollow Pass
Corral Hollow Creek
Arroyo Seco
Arroyo del Valle
Arroyo de la Laguna
Arroyo de la Piedra
Arroyo de la Purisima or Arroyo
Arroyo de los Coches
Arroyo de los Esteros
Arroyo de los Pilitas
Arroyo de los Positas
Arroyo de los Tularcitos
Arroyo de los Unistac
Arroyo de los Valle
Arroyo de los Viejo
Arroyo de los Viejo Creek
Arroyo de los Viejo Creek
Arroyo de los Viejo Creek

(Endorsed)

Map of Western Pacific R. R.
as located and constructed
from San José to Sacramento Cal.

Filed in the General Land Office
Feby. 1st/70 See letter from Sec of In-
terior dated Feby. 1st/70 H. Bk 653

U.S. Circuit Court Dist of Cal
U.S. v Carter No 3106
Respondent Exhibit 47
S.C. & Examiner

Filed July 26th 1887
L.S.B. Sawyer clerk

El Paso
Rio de los Americanos
AMERICAN R.
Valley
BRIGHTON
FLORIN
SACRAMENTO R.
W. Pacific R.R.
ELK GROVE
Omochumnes
Cosumnes
COSUMNES RIVER
COSUMNES
Moquelumnes
Mokelumne River
Mokelumne
San Joaquin
Salt
Dry Creek
WOODBRIDGE
LODI
Calaveras
Calaveras River
STOCKTON
Stockton
Mormon Slough
Mormon Channel
T.VIII N.R.IV E.
T.VIII N.R.V E.
T.VIII N.R.VI E.
T.VIII N.R.VII E.
T.VIII N.R.VIII E.
T.VII N.R.IV E.
T.VII N.R.V E.
T.VII N.R.VI E.
T.VII N.R.VII E.
T.VII N.R.VIII E.
T.VI N.R.IV E.
T.VI N.R.V E.
T.VI N.R.VI E.
T.VI N.R.VII E.
T.VI N.R.VIII E.
T.V N.R.V E.
T.V N.R.VI E.
T.V N.R.VII E.
T.V N.R.VIII E.
T.IV N.R.V E.
T.IV N.R.VI E.
T.IV N.R.VII E.
T.IV N.R.VIII E.
T.III N.R.V E.
T.III N.R.VI E.
T.III N.R.VII E.
T.III N.R.VIII E.
T.II N.R.VI E.
T.II N.R.VII E.
T.II N.R.VIII E.
T.I N.R.VI E.
T.I N.R.VII E.
T.I N.R.VIII E.

# Map of the
# WESTERN PACIFIC RAILROAD,
## showing its Connections with the
## U. S. LAND SURVEYS.

SCALE 2 MILES TO 1 INCH.

Engineers Office W. P. R. R.
Sacramento, January 3d 1870.

I, S. S. Montague, Chief Engineer of the Western Pacific Railroad Company hereby certify that this map is a correct delineation of the line of the Western Pacific Railroad as located and constructed between the City of San José and the point of Junction with the Central Pacific Railroad near Sacramento, and the connections of the said Railroad line with the lines of the U. S. land surveys are correctly shown thereon.

S. S. Montague
Chief Engineer Western Pacific R. R. Co.

Sworn to and subscribed before me, W. B. C. Brown, County Clerk of Sacramento County California, and ex-officio clerk of the sixth District Court – the same being a court of record – this 3d day of January 1870.
As witness my hand and the seal of the said court.

Seal

W. B. C. Brown
County Clerk and ex-officio clerk of said court

Recd E. T. Morris.

Rec'd at Genl. Office
Feby 27. 1873. w/ Letter from
E H Miller Jr dtd Feby. 13. 73.

16

Rec'd July 26. 1887.
L & O Survey
Clerk

Office of the Central Pacific R.R.Co.
Sacramento, California
February 12th 1873

I hereby certify that in pursuance of the several Acts of Congress. Viz; 1st An Act approved July 1st 1862. Entitled an Act to aid in the construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Postal, Military, and other purposes" 2d An Act approved July 2d 1864. An Act to amend an Act entitled "An Act to aid in the construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Postal, Military, and other purposes," approved July 1st 1862. An Act to amend an Act entitled "An Act to aid in the construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Postal, Military, and other purposes," approved July 1st 1862, and to amend Act amendatory thereof, approved July 2d 1864. Approved March 3d 1865. The annexed Map shows the Location of the line or route of the Western Pacific Railroad from the end of the first 20 mile section (from the City of San Jose) to the end of the 43d Mile, measuring from the City of San Jose the same being a part of the line or route of said railroad definately fixed, in compliance with said Acts of Congress, and in pursuance of the resolution of the board of directors of said company, passed on the [illegible] day of [illegible] along the line, from Station to Station on this Map [illegible] Central Pacific Railroad Co. Consolidated with Sacramento Valley & Western Pacific Railroad Co. has caused the same to be signed by its president and engineer, and has attatched hereunto its corporate seal at Sacramento, on the day and year first above written.

Leland Stanford President
S. S. Montague Chief Engineer.

Attest: E. H. Miller Jr.
Secretary

Seal.

Between Flags 1 and 2. Located by I. M. Clement. Resident Engr. bet Feb. 25th and April 4th 1868.

El Paso

SACRAMENTO

AMERICAN R.

Sacramento Valley Railroad

BRIGHTON

Rio de los Americanos

FLORIN

SACRAMENTO R.

ELK GROVE

Omochumnes

Cosumnes

COSUMNES

COSUMNES RIVER

Moquelumnes

Mokelumne

GALT

DRY CREEK

MOKELUMNE RIVER

Calaveras

Calaveras River

T.VIIIN.R.IVE.
T.VIIIN.R.VE.
T.VIIIN.R.VIE.
T.VIIIN.R.VIIE.
T.VIIIN.R.VIIIE.
T.VIIN.R.IVE.
T.VIIN.R.VE.
T.VIIN.R.VIE.
T.VIIN.R.VIIE.
T.VIIN.R.VIIIE.
T.VIN.R.IVE.
T.VIN.R.VE.
T.VIN.R.VIE.
T.VIN.R.VIIE.
T.VIN.R.VIIIE.
T.IVN.R.VE.
T.IVN.R.VIE.
T.IVN.R.VIIE.
T.IVN.R.VIIIE.
T.IIIN.R.VE.
T.IIIN.R.VIE.
T.IIIN.R.VIIE.
T.IIIN.R.VIIIE.

location of the Central Pacific railroad between flags [illegible] and eleven, State of California, bearing the certificates of Leland [illegible]anford, president, and S. S. Montague, chief engineer, of said road, is a true and literal exemplification of the original map filed in this office with a letter of E. H. Miller, Jr., dated Feb'y 13th, '73, received February 27th, 1873.

In testimony whereof I have hereunto subscribed [illegible]y name and caused the seal of this office to be affixed, at the city of Washington, on the day and year above written.

[L. S.] W. W. CRTIS,
*Acting Commissioner of General Land Office.*

7.

[illegible] that during the period above [illegible] A. R. Gruwy & M. F. Dauldsen, were employed by this deponent, as chief engineer of said railroad company, as deputy or division engineers; that the said engineers, as shown by their field notes, verified under oath, did actually survey and map upon the ground the line or route of the Western Pacific Railroad from [illegible] of the 20th Mile to the end of the 43d Mile, in the section [illegible] the lines respectively designated by dotted work as in [illegible] the [illegible] upon and along the line or route of [illegible] line

Sworn and subscribed this 12th day of February 1875, before me
Charles F. Forbert
Notary Public
In and for the County of Sacramento
State of California.

Seal

Rec'd at Gen'l Office
Feby 27. 1873. with letter from
E H Miller Jr dated Feby. 13. 73.

16

Rec'd July 26. 1887
L & B Dawyer
Clerk

Office of the Central Pacific R.R.Co.
Sacramento, California
February 12th 1873

I hereby certified that in pursuance of the several Acts of Congress, viz; 1st An Act approved July 1st 1862, Entitled an Act to aid in the construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Postal, Military, and other purposes; 2d An Act approved July 2d 1864. An Act to amend an Act entitled An Act to aid in the Construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Postal, Military, and other purposes; approved July 1st 1862, and 3d An Act to amend an Act entitled "An Act to aid in the construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Postal, Military, and other purposes," approved July 1st 1862, and to amend Act amendatory thereof, approved July 2d 1864. Approved March 3d 1865. The annexed Map shows the location of the line or route of the Western Pacific Railroad from the end of the first 20 mile section (from the City of San Jose) to the end of the 43d Mile, measuring from the City of San Jose, the same being a part of the line or route of said railroad definately fixed, in compliance with said Acts of Congress, and in pursuance of the resolution of the board of directors of said Company, passed on the ; and that the dates of the field work thereof are truly indicated along the line, from Station to Station on this Map. Successor to Western Pacific R.R. Co. Consolidated

In testimony whereof, the Central Pacific Railroad Co. has caused the same to be signed by its president and engineer; and has attached hereunto its corporate seal at Sacramento, on the day and year first above written.

Leland Stanford President.
Chas. D. Montague Chief Engineer.

Attest: E. H. Miller Jr.
Secretary

Seal.

Between Flags 1 and 2. Located by L.M. Clement. Resident Engr. bet. Feb. 25th and April 1st 1868.
Between Flags 2 and 3 Located by F. Lauteren. Asst. Engr. bet. April 20th and May 10th 1868.
Between Flags 3 and 4 Located by L.M. Clement. Resident Engr. bet. March 28th and April 15th 1868.
Between Flags 4 and 5 Located by L.M. Clement. Resident Engr. bet. January 28th and March 10th 1868
Between Flags 5 and 6 Located by A.S. Bender Asst. Engr. between Dec. 1st and Dec. 15th 1868.
Between Flags 6 and 7 Located by A.S. Bender Asst. Engr. between October 15th and Oct 20th 1868.
Between Flags 7 and 8 Located by A.S. Bender Asst. Engr. between October 10th and October 15th 1868.
Between Flags 8 and 9 Located by A.R. Guppy Asst. Engr. between March 26th and April 10th 1868.
Between Flags 9 and 10 Located by A.R. Guppy Asst. Engr. between Feb. 15th and March 10th 1868.
Between Flags 10 and 11 Located by John Doherty Asst. Engr. bet. the 1st and 20th day of May 1868. and examined and certified to by J.R. Wilkinson. Asst. Engr.

State of California. } ss.
County of Sacramento }

I, S.S. Montague, of Sacramento in said County and State being duly sworn, depose and say that he is the Chief Engineer of the Central and Western Pacific Railroads, and has been such chief engineer since the 1st day of November 1865, that during the period of time named, L.M. Clement, A.S. Bender, A.R. Guppy, & J.M. F. Lauteren, were employed by this deponent, as chief engineers for said railroad company, as deputy or division engineers; that the said engineers, as shown by their field notes, verified under oath, did actually survey and mark upon the ground the line of route of the Western Pacific Railroad from the [illegible] mile to the end of the 43d Mile, in the sections [illegible] and that the line of route [illegible] is the line of [illegible]

El Paso
Rio de los Americanos
American R.
Sacramento
Valley
Railroad
Brighton
Florin
Sacramento R.
Elk Grove
Cosumnes River
Cosumnes
Omochumnes
Mequelumnes
Galt
Dry Creek
Mokelumne River
Woodbridge
Mokelumne
San Joaquin
Calaveras River
Calaveras
Stockton
T.VIII N. R.V E.
T.VIII N. R.VI E.
T.VIII N. R.VII E.
T.VIII N. R.VIII E.
T.VII N. R.IV E.
T.VII N. R.V E.
T.VII N. R.VI E.
T.VII N. R.VII E.
T.VII N. R.VIII E.
T.VI N. R.V E.
T.VI N. R.VI E.
T.VI N. R.VII E.
T.VI N. R.VIII E.
T.V N. R.V E.
T.V N. R.VI E.
T.V N. R.VII E.
T.V N. R.VIII E.
T.IV N. R.V E.
T.IV N. R.VI E.
T.IV N. R.VII E.
T.IV N. R.VIII E.
T.III N. R.V E.
T.III N. R.VI E.
T.III N. R.VII E.
T.III N. R.VIII E.
T.II N. R.VI E.
T.II N. R.VII E.
T.II N. R.VIII E.

Sworn and Subscribed this 12th day of February 1873, before me
Charles Fontert
Notary Public
In and for the County of Sacramento
State of California.

Seal

T.1S.R.1W
T.1S.R.1E.
T.1S.R.2E.
T.1S.R.3E.
Cañada de los Vaqueros
T.1N.R.7E.
T.1N.R.8E.
T.1S.R.7E.
T.1S.R.8E.
Campo de los Franceses
T.2S.R.1W
San Ramon
T.2S.R.1E.
T.2S.R.2E.
Las Positas
T.2S.R.3E.
T.2S.R.4E.
T.2S.R.5E.
T.2S.R.6E.
T.2S.R.7E.
T.2S.R.8E.
Santa Rita
T.3S.R.1W.
T.3S.R.1E.
T.3S.R.2E.
T.3S.R.3E.
T.3S.R.4E.
T.3S.R.5E.
T.3S.R.6E.
T.3S.R.7E.
T.3S.R.8E.
El Pescadero
Valle de San Jose
T.4S.R.1W.
T.4S.R.1E.
T.4S.R.2E.
T.5S.R.1W
Agua Caliente
T.5S.R.1E.
T.5S.R.2E.
Tularcitos
Rincon de los Esteros
Rancho de los Esteros
Milpitas
T.6S.R.1E.
T.6S.R.2E.
Pala
T.7S.R.1W
SAN JOSE
T.7S.R.1E.
T.7S.R.2E.
Coyote Creek

July 26. 1887

L. & D. Sawyer
Clerk

Office of the Central Pacific R.R.Co.
Sacramento, California
February 26th 1873

It is hereby certified that the annexed Map No. 1 was filed in this office in pursuance of the several Acts of Congress, viz: 1st An Act of July 1st 1862, Entitled an Act to aid in the construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Postal, Military, and other purposes. 2d An Act approved July 2d 1864, An Act to amend an Act entitled An Act to aid in the Construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Postal, Military, and other purposes. approved July 1st 1862, An Act to amend an Act entitled An Act to aid in the construction of a Railroad and Telegraph Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for Military, and other purposes. approved July 1st 1862, and to amendatory thereof, approved July 2d 1864. Approved March 3d 1865.

The annexed Map shows the location of the line or route of the Central Pacific Railroad from the end of the first 20 mile section (near San Jose) to the end of the 131st Mile, measuring from the end of the first 20 mile section at San Jose, the same being a part of the line or route of said railroad as finally fixed, in compliance with said Acts of Congress, and in pursuance of a resolution of the board of directors of said company, passed on the 27th day of January 1870, and that the dates of the field work thereof are truly stated on the line, from Station to Station on this Map Sacramento & Williams

In testimony whereof, the Central Pacific Railroad Co. has caused these presents to be signed by its president and engineer, and has attached hereunto its corporate seal at Sacramento, on the day and year first above written.

Leland Stanford
President.

S. S. Montague
Engineer.

Attest: E. H. Miller Jr.
Secretary

Seal

Between Flags 1 and 2. Located by T. M. Clement.

location of the Central Pacific railroad between flags and eleven, State of California, bearing the certificates of Leland ford, president, and S. S. Montague, chief engineer, of said road a true and literal exemplification of the original map filed in the office with a letter of E. H. Miller, Jr., dated Feb'y 13th, '73, received February 27th, 1873.

In testimony whereof I have hereunto subscribed my name and caused the seal of this office to be affixed, at the city of Washington, on the day and year above written.

[L. S.] W. W. GIS,
*Acting Commissioner of General Land Office.*

7.

Sworn and Subscribed this 12th day of February 1873, before me
Charles Norbert
Notary Public
In and for the County of Sacramento
State of California.

Seal

T.VIII N. R. IV E.
T.VIII N. R. V E.
T.VIII N. R. VI E.
T.VIII N. R. VII E.
T.VIII N. R. VIII E.
T.VII N. R. IV E.
T.VII N. R. V E.
T.VII N. R. VI E.
T.VII N. R. VII E.
T.VII N. R. VIII E.
T.VI N. R. V E.
T.VI N. R. VI E.
T.VI N. R. VII E.
T.VI N. R. VIII E.
T.V N. R. V E.
T.V N. R. VI E.
T.V N. R. VII E.
T.V N. R. VIII E.
T.IV N. R. V E.
T.IV N. R. VI E.
T.IV N. R. VII E.
T.IV N. R. VIII E.
T.III N. R. V E.
T.III N. R. VI E.
T.III N. R. VII E.
T.III N. R. VIII E.
T.II N. R. VI E.
T.II N. R. VII E.
T.I N. R. VII E.
T.I N. R. VIII E.

SACRAMENTO
BRIGHTON
FLORIN
SACRAMENTO R.
ELK GROVE
COSUMNES
COSUMNES RIVER
MOKELUMNE
MOKELUMNE RIVER
GALT
STOCKTON
Rio de los Cosumnes
Mokelumnes
Cosumnes
Mokelumne
San Joaquin

Seal

In and for the County of Sacramento
State of California.

T.1S.R.1W.
T.1S.R.1E.
T.1S.R.2E.
T.1S.R.3E.
T.1S.R.7E.
T.1S.R.8E.
T.1S.R.9E.

T.2S.R.1W.
San Ramon
T.2S.R.1E.
T.2S.R.2E.
Las Positas
T.2S.R.3E.
T.2S.R.7E.
T.2S.R.8E.
T.2S.R.9E.

T.3S.R.1W.
Santa Rita
T.3S.R.1E.
T.3S.R.2E.
T.3S.R.3E.
T.3S.R.4E.
T.3S.R.5E.
T.3S.R.7E.
El Pescadero
T.3S.R.8E.
T.3S.R.9E.

T.4S.R.1W.
Valle de San José
T.4S.R.1E.

T.5S.R.1W.
Agua Caliente
T.5S.R.1E.

T.6S.R.1W.
Tularcitos
Milpitas
T.6S.R.1E.
Encomada de los Esteros
Arroyo de los Esteros
Pala

T.7S.R.1W.
SAN JOSE
T.7S.R.1E.

Canada de los Vaqueros
Valle de San José
Pala

Office of the Central
Sacramento California
February 12th 1873

I hereby certify
pursuance of the several Acts of Congress. Viz; 1st An Act
July 1st 1862. Entitled an Act to aid in the construction of a
Telegraph Line from the Missouri River to the Pacific Ocean, and
Government the use of the same for Postal, Military, and other pu
2d An Act approved July 2d 1864. An act to amend an Act e
Act to aid in the Construction of a Railroad and Telegraph L
Missouri River to the Pacific Ocean, and to secure to the Gover
of the same for Postal, Military, and other purposes," appro
and 3d An Act to amend an Act entitled "An Act to aid in th
of a Railroad and Telegraph Line from the Missouri Riv
Ocean, and to secure to the Government the use of the same f
itary, and other purposes," approved July 1st 1862, and to am
amendatory thereof," approved July 2d 1864. Approved Marc
The annexed Map shows the Location of the line or route of t
Pacific Railroad from the end of the first 20 mile section
of San Jose) to the end of the 132 Mile, measuring from the
Jose, the same being a part of the line or route of said railr
sized, in compliance with said Acts of Congress, and in pur
olution of the board of directors of said Company, passed on th
; and that the dates of the field work thereof are truly ind
Station on this Map
line, from Station to Station on this Map
In testimony whereof, the Central Pacific Railroad Co. has caused th
by its president and engineer, and has attached hereunto it
Sacramento, on the day and year first above written.

Leland Stanford
Pres.
Chas. D. Montague
Engineer.

Attest: E. N. Miller Jr.
Secretary

Seal.

Between Flags 1 and 2, Located by L. M. Clement.
Resident Engr. bet. Feb. 23d and April 1st 1868.
Between Flags 2 and 3 Located by F. Lauren.
Asst. Engr. bet April 20th and May 10th 1868.
Between Flags 3 and 4 Located by L. M. Clement.
Resident Engr. bet. March 28th and April 15th 1868.
Between Flags 4 and 5 Located by L. M. Clement.
Resident Engr. bet. January 28th and March 10th 1868
Between Flags 5 and 6 Located by A. S. Bender
Asst. Engr. between Dec. 1st and Dec. 15th. 1868.
Between Flags 6 and 7 Located by A. S. Bender
Asst. Engr. between October 15th and Oct 20th 1868.
Between Flags 7 and 8 Located by A. S. Bender
Asst. Engr. between October 10th and October 15th 1868.
Between Flags 8 and 9 Located by A. R. Guppy
Asst. Engr. between March 26th and April 10th 1868.
Between Flags 9 and 10 Located by A. R. Guppy
Asst. Engr. between Feb. 15th and March 10th 1868.
Between Flags 10 and 11 Located by John Doherty
Asst. Engr. bet. the 18th and 20th day of May 1868 and Examined
and Certified to by J. R. Wilkinson. Asst. Engr.

State of California. } ss.
County of Sacramento }

S. S. Montague, of Sacramento in said
County and State being duly sworn, deposeth, and says that he is the
Chief Engineer of the Central and Western Pacific Railroads,
that he has been such chief engineer since the 1st day of September 1865,
that during the period above named, L. M. Clement, A. S. Bender,
A. R. Guppy, and F. Lauren, have been employed by this deponent,
as engineers for said railroad company, and by his orders upon
the ground; that the said engineers, at the time their field notes
were taken, did actually survey and examine upon the
ground the several lines of the Western Pacific Railroad from
the end of the 20 mile to the end of the 132 mile on the latest
line by them, and that the field notes and plats
of the same are correct.

Sworn and Subscribed this 12th day of February 1873, before me
Charles Norbert
Notary Public
In and for the County of Sacramento
State of California.

Seal

T.VIIIN.R.IVE. T.VIIIN.R.VE. T.VIIIN.R.VIE. T.VIIN.R.VIIE. T.VIIN.R.VIIIE.
T.VIIN.R.IVE. T.VIIN.R.VE. T.VIIN.R.VIE. T.VIIN.R.VIIE. T.VIIN.R.VIIIE.
T.VIN.R.IVE. T.VIN.R.VE. T.VIN.R.VIE. T.VIN.R.VIIE. T.VIN.R.VIIIE.
T.VN.R.VE. T.VN.R.VIE. T.VN.R.VIIE. T.VN.R.VIIIE.
T.IVN.R.VE. T.IVN.R.VIE. T.IVN.R.VIIE. T.IVN.R.VIIIE.
T.IIIN.R.VE. T.IIIN.R.VIE. T.IIIN.R.VIIE. T.IIIN.R.VIIIE.
T.IIN.R.VIE. T.IIN.R.VIIE.
T.IN.R.VIIE. T.IN.R.VIIIE.

SACRAMENTO R.
FLORIN
FLK GROVE
CONSUMNES
CONSUMNES RIVER
Moquelumnes
Cosumnes
Mequelumnes
San Joaquin
MOKELUMNE RIVER
GALT
Dry Creek
WOODBRIDGE
MOKELUMNE
STOCKTON
Campo de los Franceses

T.1S.R.1W.
T.1S.R.1E.
T.1S.R.2E.
T.1S.R.3E.
T.1S.R.7E.
T.1S.R.8E.
T.1S.R.9E.
Cañada de los Vaqueros
T.2S.R.1W.
T.2S.R.1E.
T.2S.R.2E.
T.2S.R.3E.
T.2S.R.4E.
T.2S.R.7E.
T.2S.R.8E.
T.2S.R.9E.
San Ramon
Las Positas
Santa Rita
T.3S.R.1W.
T.3S.R.1E.
T.3S.R.2E.
T.3S.R.3E.
T.3S.R.4E.
T.3S.R.7E.
T.3S.R.8E.
El Pescadero
Valle de San Jose
T.4S.R.1W.
T.4S.R.1E.
Agua Caliente
T.4S.R.2E.
Tularcitos
Milpitas
T.5S.R.1W.
T.5S.R.1E.
Penitencia Creek
Coyote Creek
SAN JOSE
T.6S.R.1W.
T.6S.R.1E.
Pala
T.7S.R.1W.
T.7S.R.1E.

Filed July 26. 1894
L. A. Hanson Clerk

17

EXHIBIT "Hopkins"

Arroyo del Ingerto

Mt Diablo

T.1S.R.1W.

T.1S.R.1E.

SAN RAMON
Bartolo Pacheco

LOMAS DE LAS CUEVAS

T.1 N. R.2 E.

Cañada de los Vaqueros
as patented.

SUMMIT OF COAST RANGE

Arroyo de S. Ramon

SAN RAMON
José Mª Amador

SANTA RITA

Dolores Pacheco

Tasajara Creek

T.2S.R.1W.

T.2S.R.1E.

T.2S.R.2E.

Livermore Pass

Site of Amador's old House

Positas Creek

Laguna Seca

Cienega

Willow Thicket

T.3S.R.1W.

T.3S.R.1E.

T.3S.R.2E.

Palos Secos

Corral Hollow Pass

SIERRA DE BUENOS AYRES

Dyer Survey red
Lewis " green
Hinal " yellow
Land in question Brown